04.01.2023

ടെൻഡർ നോട്ടീസ്

സൂചന : സർവകലാശാലാ ഉത്തരവ് നമ്പർ 9004/P&D1/2022/MGU തിയതി 31.08.2022

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മഹാത്മാഗാന്ധി സർവകലാശാലയിലെ ഐ.ഐ.ആർ.ബി.എസ് എന്ന സ്ഥാപനത്തിന് (സൂചന പ്രകാരം) അനുവദിക്കപ്പെട്ട തുകയിൽ നിന്നും താഴെ സൂചിപ്പിച്ചിരിക്കുന്ന നിബന്ധനകൾ പ്രകാരം ചുവടെ ചേർക്കുന്ന സാധന സാമഗ്രികൾ വിതരണം ചെയ്ത് ഉത്തരവാദിത്വത്തോടെ സ്ഥാപിച്ച അനുബന്ധ ജോലികൾ പൂർത്തീകരിച്ച തരുന്നതിന് വ്യക്തികൾ/ സ്ഥാപനങ്ങളിൽ നിന്നും സീൽ ചെയ്ത ടെൻഡറുകൾ ക്ഷണിച്ചുകൊള്ളുന്നു.

SL NO	PRODUCT DESCRIPTION	Quantity	Unit
1	Supply, Installation, Testing and Commissioning of ETL Verified Cat 6 U/UTP 23AWG Low Smoke Zero Halogon Cable white / gray jacketed, 4-pair Roll of 305 Meter as per the technical specifications	22	Boxes
2	Supply, Installation, Testing and Commissioning of 24 port UTP, IU Size Loaded patch Panel as per the technical specifications	5	Nos
3	Supply, Installation, Testing and Commissioning of Cat 6 U/UTP Information Outlet, white / Ivory for floor side, as per the technical specifications.	85	Nos
4	Supply, Installation, Testing and Commissioning of Cat-6A U/UTP Reusable Connector Assembly as per the technical specifications.	28	Nos
5	Supply, Installation, Testing and Commissioning of Cat 6 U/UTP Blue Patchcord 2 mtr for floor side, as per the technical specifications.	205	Nos
6	Supply, Installation, Testing and Commissioning of universal, one port, British Standard style, unshuttered, Faceplate white, as per the technical specifications.	85	Nos
7	Supply, Installation, Testing and Commissioning of 6F Single Mode Multitube Dry Tube Fiber Optic cable, 9/125 SM OS2 as per the technical specifications.	50 (Approximate)	Meter
8	Supply, Installation, Testing & Commissioning of 6 Port intelligent ready fibre shelf loaded with LC OS2, Pigtail, Splice tray, adaptor and all accessories as per the technical specifications.	2	Nos
9	Fibre Optic Patch Cord LC-LC, Single mode, 3 meter as per the technical specifications.	2	Nos
	Supply, Installing and commissioning of 27U		

10	600x650 Floor Mount Cabinet Single Section With four Fan with all accessories as per the technical specifications.	1	Nos
11	Supply, Installation, Testing and commissioning of 24 port entreprise access switch with 4x1 10G modular uplinks as per the technical specifications.	2	Nos
12	Supply, Installation, Testing and commissioning of 24 port POE entreprise access switch with 4x1 10G modular uplinks as per the technical specifications.	1	Nos
13	Supply, Installation, Testing and commissioning of 10GBASE SFP+ modules as per the technical specifications	2	Nos
14	Supply, Installation, Testing and commissioning of Wi-Fi 6 Wireless Access Point, supports dual band 2.4 - GHz and 5GHz bands with MU-MIMO technology without annual subscription as per the tender specifications.	5	Nos
15	Supply, Installation, Commissioning of Medium 25mm PVC LHSFT (Low Halogen Smoke Suppressing Fire Retardant Temperature Stable Lead Free) PIPE, white / Ivory color, confirming to the standards of IS 9537-Part 3, BS EN 61386-21, IS 3419:1988 and BS 4607 for uPVC fittings. Provided with M4 brass insert with a load suspension capacity of 3Kgs at 60 degree C as per the technical specifications	2240 (Approximate)	Meter
16	Supply, Installation, Commissioning of PVC Backbox suitable for face plate. The size will be 3Hx3Wx2D with all mounting accessories, white / Ivory color, confirming to the standards of IS 9537-Part 3, BS EN 61386-21, IS 3419:1988 and BS 4607 for uPVC fittings as per the technical specifications	85	Nos
17	50x100 mm Trunking Systems (ISI)	10 (Approximate)	Meter

TECHNICAL SPECIFICATIONS

1.Scope of Structured Cabling.

Structured Cabling shall be the premise infrastructure and physical media for LAN (Data, Voice & Video) which shall be of high-speed switched, multi-protocol, Ethernet based network, providing converged IP based services, Power Over Ethernet, etc. This document defines the cabling system and subsystem components to include cable, termination hardware, supporting hardware, and miscellany required to supply, and to install a complete cabling infrastructure supporting data, voice and video. The intent of this section is to provide pertinent information to allow the vendor to bid the labour, supervision, tooling, materials, and miscellaneous installation hardware and consumables to install a complete system. However, it is the responsibility of the vendor to propose any, and, all items required for a complete system whether or not it is identified in the specification, drawings and bill of materials attached to this specification.

2. Eligibility Criteria for Passive Bidder or OEM:

2.1 OEM should have large installation base in Kerala to prove the solution acceptance (List of minimum 5-10 customer details to be furnished)
2.2 They should have large installation base in India with well distribution system to support the clients (List of National distributors details to be furnished)
2.3 All proposed products shall be available in OEM authorised website with related product ID to download the product data sheet with all technical information
2.4 For safety reasons, the Products such as indoor cable, patch cords etc. shall not be made of PVC jacket. The products shall be made with CMR rated or LSZH as per IEC-60332-3 for the assessment of vertical flame spread of vertically mounted bunched cables
2.5 All Passive Components should be RoHS (Restriction of Certain Hazardous Substances) complied. Declaration –RoHS Compliant should clearly be mentioned on datasheets of each Passive Components
2.6 OEM shall provide the online verification system to verify the Genuity of the products which they offer. This will make sure all proposed products are origin from OEM and qualify all technical and performance parameters as per global standard
2.7 The OEM should not be blacklisted/debarred by of the agencies in India or by Government of any other State in India or any of the Government PSUs within the last five years from the date of publishing the bid
2.8 Bidders should have ISO 9001:2015 Certification for Quality Management System

3.Submittals:

The bidder shall ensure to submit the following details in their bid. Omission of items mentioned mandatory shall lead to rejection of the bid.
3.1 System Description (mandatory)
3.2 Compliance Statement (mandatory)
3.3 Data sheets (relevant pages only)
3.4 Bill of Quantity (Make, Model including material ID, Quantity)
3.5 Drawings (as required)
3.6 Supporting documents mentioned in all criteria (mandatory)

4. Technical evaluation:

The Bidder shall only use complied products as per the specification mentioned in the tender document. Any variation from “fully-complied” shall be mentioned as “partially complied” and the variation shall be mentioned clearly in a separate “Remarks”. Only fully complied products will be qualified for the commercial evaluation

5. Documents to be Submitted along with Proposal:

The vendor shall ensure to submit the following details/documents in their proposal. Omission of items mentioned below shall lead to rejection of the proposal.
5.1. Complete Bill of Quantity against tender specification and requirement (Make of product, Model number including material ID, Quantity, Unit of measurement, etc.)

5.2 Products material ID, product description along with relevant OEM Data sheets
5.3 Compliance Statement filling with the proposed product specification. Mention any deviation if any (mandatory)
5.4 Details of Terms and conditions, Limitations, Procedure to avail extended 25 Years of application assurance warranty from OEM
5.5 Installation guidance and maintenance procedure of post Installed Single-Mode Fiber Cable Plant
5.6 Declaration of RoHS (Restriction of Certain Hazardous Substances) complied for all the proposed products.

TECHNICAL SPECIFICATIONS FOR STRUCTURED CABLING

1.CAT 6 LSZH U/UTP Cable

Sl. No.	Details	Cat-6 Horizontal Cable
1	Type	Unshielded / Unshielded Twisted Pair (U/UTP), Category 6 Cable - White color.
2	Standards	The Cable should meet ANSI/TIA 568C.2 Category 6 Specifications
3	Conductors	The cable should consist of Eight 23 AWG bare copper conductors. Copper Clad Aluminum or any other combinations are not allowed
4	Cable weight	The weight of the cable box of 1000 Feet should not be less than 25 lb/kft
5	Frequency	Maximum Operating Frequency will be 400 MHz
6	Jacket thickness	The nominal Jacket thickness should be 0.020 inches
7	Outside diameter	The nominal Outside diameter should be 0.233 inches
8	Operating Voltage	Maximum Operating Voltage will be 80V
9	Pair Separator	Pair Separator shall be Bisector tape reduce the cross talk and improve performance
10	Pulling Tension	maximum Pulling Tension will be 11 KG
11	Temperature	The cable should support the installation temperature: 0 to 60 0 C
12	Third party certificate for Genuity	ETL four connector channel certificate for long distance and short distance test report.
13	Fire safety Listing	CMR Rated
14	Jacket type	The LSZH Cable should support the following standard to qualify
		a. ISO/IEC 60332-3-22 Vertical Flame spread test
		b. ISO/IEC 60754-2Acidity
		c. ISO/IEC 61034-2 Smoke Density

		d. 3rd Party verification of Fire safety/environmental tests listed above must be provided as part of the bid response.
15	Additional info	The cable and cordage shall be UTP components that do not include internal or external shields, screened components or drain wires that require additional grounding and bonding
16	Online Verification	The cable test parameters shall include NEXT, PSNEXT, Return Loss, Attenuation, ELFEXT and PSELFEXT. The on-line reference must be available on the SCS vendor public website, such that it can be accessed at any time.
17	RoHS	RoHS Compliant

2.Category 6 UTP Information Outlets

Sl. No.	Details	Standard Compliance
1	Standards	All Category 6 UTP outlets shall meet or exceed Category 6 transmission requirements for connecting hardware, as specified in TIA/EIA 568-B.C.2 Commercial Building Telecommunications Cabling Standard and ISO/IEC 11801:2002 Second Edition.
2	Compatibility	The Category 6 outlets shall be backward compatible with Category 5E, 5 and 3 cords and cables.
3	Outlet Design	The Category 6 outlets shall be of a universal design supporting T568 A & B wiring.
4	Termination procedure	The Category 6 outlets shall be able to terminate without tool for the quick termination
5	Mounting options	The Category 6 outlets shall be capable of being installed at either a 45^{i} or a 90^{i} angle in any M-series modular faceplate, frame, or surface-mounted box avoiding the need for special faceplates.
6	Noise cancellation	The Category 6 outlets shall have improved pair splitters and wider channel for enhanced conductor placement.
7	General specifications:	a. Meets or exceeds the mechanical, electrical, and clearance specifications in FCC Rules and Regulations, Part 68, Subpart F
		b. Meet or exceed the Category 6 requirements in ISO/IEC 11801, CENELEC EN 50173, and TIA/EIA568B
		c. The 8-pin modular (RJ-45) jacks shall comply with IEC 60603-7-4.
8	Third party certificate for Genuity	ETL four connector channel certificate for long distance and short distance test report.
9	PoE and PoE+ applications	The information outlet shall have a Current Rating of 1.5 A at 20°C to support the PoE and PoE+ applications

10	insertion life cycles	The information outlet will have insertion life of 750 cycles minimum.
11	Type of conductors	The information outlet must be able to accept termination of solid conductors with nominal diameter of between 0.40 mm to 0.64 mm (26 to 22 AWG).
12	Test Methodology for performance	Outlet shall be tested with MDM Methodology for higher performance
13	RoHS	RoHS Compliant

3.CAT 6 LSZH U/UTP RJ45 Patch Cords

Sl. No.	Details	Standard Compliance
1	Type	Unshielded / Unshielded Twisted Pair (U/UTP), Category 6 patch cords -Different color shall be available.
2	Standards	The Cordage should meet ANSI/TIA 568C.2 Category 6 Specifications
3	Length	The cordage shall be available in different length based on the site requirement
4	Construction	All cords shall be round, and consist of copper conductors, tightly twisted into individual pairs.
5	Cordage diameter	Nominal cordage diameter shall not exceed 5.92 mm.
6	Plug design	Plugs shall be designed with an anti-snag latch to facilitate easy removal during move, add and change processes.
7	Jacket type	The cordage sheath shall be made of Low-Smoke, Zero Halogen (LSZH)
8	Fire Safety standards:	The LSZH version must comply with the following Fire Safety standards:
		a. ISO/IEC 60332-3-22: Vertical Flame Spread
		b. ISO/IEC 60754-2: Acidity
		c. ISO/IEC 61034-2: Smoke Density
9	3rd Party verification	3rd Party verification of the Fire Safety/ Environmental tests listed above must be provided as part of the bid response.
10	Additional info	The cable and cordage shall be UTP components that do not include internal or external shields, screened components or drain wires that require additional grounding and bonding
11	insertion life cycle	The patch cords will have insertion life of 750 cycles minimum.
12	RoHS	RoHS Compliant

4.CAT 6 Patch Panel-24 port-Loaded

Sl. No.	Details	Standard Compliance
1	Type	Patch panel Unshielded / Unshielded Twisted Pair (U/UTP), Category 6
2	Standards	The panel should meet ANSI/TIA 568C.2 Category 6 Specifications
3	Panel configuration	The panel shall be available in 24-port and 48-port configurations with universal A/B labeling and 110 connector terminations on rear of panel allowing for quick and easy installation of 22 to 24 AWG cable
4	Modular panel	The ganged adapter style patch panel will utilize increments of six RJ-45 style jacks in a common molded component.
5	Insertion life cycle	The patch panel shall be compliant with IEC 60603-7 for Plug Insertion life test and minimum Plug Insertion life shall be 750 times
6	Patching and Termination procedure	The ganged adapters shall have RJ45 jack in the front and Insulation Displacement Connector (IDC) at the rear of the module.
7	Material used	Panel shall be available in straight and angled style with made of Powder-coated steel
8	Additional future for noise cancellation	Termination managers must be provided with the panel. These termination managers provide proper pair positioning, control, and strain relief features to the rear termination area of the panel.
9	Panel size	Panel size shall be 120mm (D), 45mm (H), 485 mm (W)
10	Flammability Rating	UL 94 V-0
11	Third party certificate for Genuity	ETL four connector channel certificate for long distance and short distance test report.
12	Rear cable manager	Panel shall have rear cable manger with proper design to hold all 24 cable. This shall provide strain relief for outlet and organization of cables being routed to the back of a patch panel.
13	Channel performance	When configured in worst-case 100-meter channels with full cross-connects and consolidation points with the other products proposed in this tender, the panel shall be capable of delivering the minimum guaranteed channel performance.
14	RoHS	RoHS Compliant

5.Shuttered Face Plate

Sl. No.	Details	Standard Compliance
1	Standards	The Face plate should meet ANSI/TIA 568C.2 Category 6 Specifications
2	Port	Shall be available in 2 port and 4 port square versions.
3	General Specifications	a. Color: White b. Width: 86.36 mm (3.4 in) c. Height: 86.36 mm (3.4 in) d. Depth: 13.72 mm (0.54 in)
4	Material	Material shall be high impact, flame retardant, UL-rated 94 V-0, thermoplastic.
5	Flammability Rating	UL 94 V-0
6	Compatibility	Shall be compatible with CAT 5e/CAT 6 information outlets.
7	Shutter to prevent dust	Shall have inbuilt shutters to prevent dust to accumulate on the information outlets which are not in use.
8	Number of plates	Two plate/pieces (base and front plate) for better Aesthetic (Premium type)
9	RoHS	RoHS Compliant

6.Cat-6 U/UTP Outdoor Cable-Double sheath (optional)

Sl No.	Details	Specification
1	Type	Unshielded Twisted Pair, Jell free, Category 6, TIA / EIA 568-C.2 & ISO/IEC 11801
2	Environment	Double jacketed cable for indoor & outdoor application and crush resistance
3	Conductors	23 AWG solid bare copper
5	Insulation	Polyolefin
6	Outer sheath	LSZH for Indoor purpose
7	Inner sheath	Polyethylene, UV Resistant for outdoor purpose
8	Pair Separator	Cross-member (+) fluted Spline.
9	Temperature range	-20 Deg. C to +70 Deg. C
10	Frequency tested up to	Minimum 250 MHz
11	Packing	Box of 305 meters
12	Cable Outer Diameter	7.2 mm nominal
13	Delay Skew	45ns MAX.
14	Bend Radius	28mm Minimum
15	Color	Black
16	Conductivity	Cable shall not have any metal/Armour layer to protect. They can carry the electrical/lighting current directly to

		switch, if the cable is exposed to environment
17	Impedance	100 Ohms + / - 15 ohms, 1 to 250 MHz.
18	Mutual Capacitance	5.6 NF MAX /100 Mtr.
19	Conductor Resistance	66.58 Ohms Max / KM
20	Propagation Delay	536 ns/100 Mtrs. MAX @ 250 Mhz
21	Transmission Standards	ANSI/TIA-568.2-D, ISO/IEC 11801 Class E
22	Remote Powering	Cable shall be fully complied with the recommendations set forth by IEEE 802.3bt (Type 4) for the safe delivery of power over LAN cable when installed according to ISO/IEC 14763-2, CENELEC EN 50174-1, CENELEC EN 50174-2 or TIA TSB-184-A
23	Performance characteristics to be provided along with bid	Attenuation, Pair-to-pair and PS NEXT, ELFEXT and PSELFEXT, Return Loss, ACR and PS ACR
24	ROHS Compliant	ROHS/ELV Compliant

7.Single mode (OS2) Armored Indoor/Outdoor Fiber cable -Jell filled, ULSSZH

Sl. No.	Specifications	Requirement
1	Cable Type	Single Jacket, Armored, Dry tube, Indoor/Outdoor Stranded Loose Tube Cable
2	Fiber Type	G.652.D and G.657.A1, Single mode OS2, Zero Water Peak Cable
3	No of cores	12
4	Fiber dia. and identification	9/125/250 with different color sequence as defined by TIA standard for identification
5	Armoring Type	Corrugated Steel Tape Armour for crush and rodent protection
6	Cable Construction	Unitube construction for better crush resistance
7	Central Strength Members	NA
8	Outer Sheath	ULSZH
9	No. of Loose Tubes	One
10	Subunit Type	Jell filled
11	Jacket UV Resistance	UV Stabilized
12	Ripcord	NA
13	Jacket Color	Black
14	Standards	ANSI/ICEA S-87-640 | EN 187105 | Telcordia GR-20 | ITU-T G.652.D | ITU-T G.657.A1 | TIA-492CAAB (OS2)
15	Online Verification	The cable test parameters shall include Attenuation, Bandwidth, Specification etc. The on-line reference must be available on the cabling vendor public website, such that it can be accessed at any time to check the Genuity of the supplied cable
16	Regulatory Compliance	RoHS 2011/65/EU compliant

8.19" Fiber Optic panel sliding type, unloaded

Sl. No.	Specifications	Requirement
1	Fiber panel type	Fiber panel shall be made of metal with powder coated which shall Accepts one front faceplate made of metal and two Splices tray with three trays each.
2	Size of the panel	The width shall be 19 inches and height of 1U (1.75 inches), with a maximum of 18-inch depth.
3	Sliding shelf for easy access	The unloaded 1U fiber panel/LIU shall be sliding panel to access the termination point from and rear side (Fixed panel will not be accepted)
4	Adapters capability	Panel shall be capable of Accepts 24 Duplex LC Adapters (48 fiber Ports) or Accepts 24 Duplex SC Adaptors (48 fiber ports)
5	Space for splice tray	Shall have enough space for holding splice trays to splice minimum 32 fibers.
6	Mounting arrangement	Mounting brackets can be placed in different positions while mounting the panel in to the rack
7	Rear cable manager	Panel shall have additional rear cable manager to hold the armored cable after the termination
8	Front cable manager	Panel shall have front cable manager to manage the patch cords routing
9	Cable entry	Minimum four numbers of knock-out hole shall be provided at the rear side of the panel for fiber cable entry. Additional grommet shall be used at the time of the installation
10	Top cover	Provide Transparent removable cover on top of the fiber panel. This sliding cover shall be slide out to investigate the fiber termination and cable routing inside the panel
11	Cable holder	Panel also shall be provided with the cable holder to hold the cable with cable tie. This shall be strong enough to hold, if the cables are armored
12	Regulatory Compliance	RoHS 2011/65/EU compliant

9. Face Plate Panel with Adaptor

Sl. No.	Specifications	Requirement
1	Face plate type	1U Front Faceplate, unpopulated, accepts 24 duplex LC adapters
		Front Face Plate Panel with Adaptor shall use in conjunction with unpopulated panel
2	Interface type	LC Type interface for high density with duplex design
3	Color	Aqua for Multimode
4	Insertion Loss	Insertion Loss will ≤ 0.50 dB at Random mated for 97% ≤ 0.25 dB at Random mated average

5	Transmission standards	TIA/EIA-604 FOCIS-3 | TIA/EIA-568-B.3
6	Regulatory Compliance	RoHS 2011/65/EU compliant

10.Splice tray Kit with 2 fusion splice trays

Sl. No.	Specifications	Requirement
1	Splicing type	Product type shall be Fusion splice kit
2	Mounting	For 1U shelves and surface mount enclosures
3	Splice Trays	Splice Trays shall be Included
4	Number of Splice Trays	Number of Splice Trays will be 2
5	Splices quantity	Splices, quantity will be 32
6	Regulatory Compliance	RoHS 2011/65/EU compliant

11.Single mode (OS2) LC Pigtails, 5 feet

Sl. No.	Specifications	Requirement
1	Fiber type	Single mode OS2
2	Construction	One fiber Cordage Non-armored gel free cable
3	Cable Sheath	Low Smoke Zero Halogen (LSZH) Riser rated
4	Connector type	LC/UPC to Unconnectorized, Fiber Pigtail, 0.9 mm Riser
5	Cable Length	Cable Length 5 feet
6	Color	Yellow color for cable and Blue color for connector
7	Protection	Aramid yan shall be provided around 250nm fiber cable
8	Minimum Bend Radius	38 mm (Loaded), 15mm (Unloaded)
9	Tensile Load, maximum	20N (long term) 67N short term)
10	Compression	10 N/mm as per IEC 60794-1 E3 test method
11	Ferrule	Pre-radiused made of Zirconia
12	Cable Qualification Standards	ANSI/ICEA S-83-596, Telcordia GR-409
13	Flame Test Listing	NEC OFNR-LS (ETL) and c(ETL)
14	Flame Test Method	IEC 60332-3, IEC 60754-2, IEC 61034-2, IEEE 383, UL 1666, UL 1685
15	Insertion Loss, maximum	0.25 dB
16	Return Loss, minimum	50 dB
17	Regulatory Compliance	RoHS 2011/65/EU compliant

12.Single mode (OS2) LC to LC Patch Cord, 3 meters

Sl. No.	Specifications	Requirement
1	Fiber type	Single mode OS2
2	Construction	Two fiber duplex Cordage Non-armored gel free cable
3	Cable Sheath	Low Smoke Zero Halogen (LSZH) Riser rated
4	Connector type	LC/UPC to LC/UPC, Fiber patch cord 1.7mm / 3.5mm. Riser
5	Cable Length	Cable Length 3 meters

6	Color	Yellow color for cable and Blue color for connector
7	Protection	Aramid yan shall be provided around 250nm fiber cable
8	Minimum Bend Radius	38 mm (Loaded), 15mm (Unloaded)
9	Tensile Load, maximum	20N (long term) 67N short term)
10	Compression	10 N/mm as per IEC 60794-1 E3 test method
11	Ferrule	Pre-radiused made of Zirconia
12	Cable Qualification Standards	ANSI/ICEA S-83-596, Telcordia GR-409
13	Flame Test Listing	NEC OFNR-LS (ETL) and c(ETL)
14	Flame Test Method	IEC 60332-3, IEC 60754-2, IEC 61034-2, IEEE 383, UL 1666, UL 1685
15	Insertion Loss, maximum	0.25 dB
16	Return Loss, minimum	50 dB
17	Regulatory Compliance	RoHS 2011/65/EU compliant

TECHNICAL SPECIFICATIONS OF NETWORK RACK

(A). 42U 800x100 NETWORK RACK

SL NO	DETAILS	REQUIREMENT	COMPLIANCE YES / NO	REMARKS
1	General Requirements	Rack should be designed to provide Secure, Store, Streamline and Systemize IT Equipment's		
		Rack should have 100% assured compatibility with all equipment's conforming to **DIN 41494** (General Industrial Standard for equipment's) or Equivalent **EIA /ISO / EN** Standard		
		The Rack should have 4 No Adjustable, 19" verticals with Punched 10mm Square Hole and Universal 12.7mm-15.875mm-15.875mm alternating hole pattern offering greater mounting flexibility, with numbered U positions		
		The Rack should be 2115 mm in height, 800mm in width and 1000mm in depth		
2	Physical Specifications	Rack should support static load of 750 kgs on Casters and 1250kgs on levelers		

		Rack should have front Perforated door		
		Rack should have rear Dual perforated door		
		Rack should have 2 side panels and grounding and bonding accessories pre-installed by the manufacturer.		
3	Equipment Access & Installation	The Rack should have 42U usable Space		
		The Rack should have 4No's adjustable, 19" verticals with punched 10mm square hole and Universal 12.7mm-15.875mm-15.875mm alternating hole pattern offers greater mounting flexibility, with numbered U positions		
		The OEM should include 20 No of Mounting hardware for equipment fixing.		
		The front and rare doors should be easily detachable.		
		The front and rear doors should open to allow easy access.		
		The doors of the rack should be reversible such that it can be mounted on either side.		
		The rack should have side panels which can be removed without using tools, using easy finger latches for fast access to cabling and equipment. Side panels should flush with the frame so the overall width of the unit does not change with the side panels installed.		
4	Material Requirements	All weight bearing components should be made from steel with a thickness not less than 1.6 mm, 19" equipment mounting angle should be 2.0MM and other parts not less than 1mm		
		All sheet metal parts should be Pre-Treated and powder coated meeting ASTM Standard.		

5	Grounding Requirements	All enclosure components i.e., frame and door should be bonded together and to rack ground point		
		OEM to provide rack ground point, Provision to further ground to Telecom Ground bus bar System		
		Grounding and bonding as per UL Standards		
6	Certifications, Environmental and Safety Requirements	Racks should be manufactured by **ISO9001:2008, ISO14001:2004 & OHSAS18001:2007** Certified company and should have proper EHS Policy.		
		Products must be **UL** Certified		
		Manufacturer must certify that the products are **RoHS** Compliance		
		Manufacturer must certify that the products are Comply DIN41494 and Equivalent EIA/ISO/EN /CEA Standard.		
		The rack should comply minimum of IP 20 rating for protection against touch, ingress of foreign bodies and ingress of water.		
		The enclosure should both protect the user from mechanical hazards and generally meet the requirements for a mechanical enclosure (stability, mechanical strength, aperture sizes, etc.) as defined in IEC 60950 Third Edition.		
7	Ventilation and Thermal Management	The unit should have ventilated front and rear doors to provide adequate airflow required by the major server and Network manufacturers.		
		Provision to Fix Exhaust Fans 360CFM Fan Module on the top		

8	Cable Management	Rack should have 1 No Horizontal cable manager for cable routing.		
		Network Rack should have 19" Adopter Kit/42U/Loop side cable management inside the rack		
9	Rack Power Distribution Units & Environmental monitoring			
	Type Of PDU	Normal		
	Phase	1Phase		
	Rating	7.3		
	Current	32		
	Type Of Out Let	Indian Round Pin		
	No Of Out let	12 Sockets		
	PDU Mounting	Vertical		
	Space Requirement	0		
	Out let level Switching	Not Required		
	Measurement	Out let level		
10	Accessories	Shelving: - The manufacturer should offer shelves with the ability to support up to 100 kg of non-rack mount equipment		
11	Stabilization	The manufacturer should have optional stabilizer plate kit, consisting of a plate, and mounting hardware that can be attached to the enclosure frame, and that can be bolted to the floor.		
		The unit should have four adjustable leveling feet to help provide a stable base in the event of an uneven floor surface and to prevent rolling.		
12	Delivery & Installation	The unit should be shipped fully assembled as one orderable Unit.		
		The manufacturer should offer an inside-delivery shipping option which includes reasonable delivery to the inside of the building and		

		removal and disposal of shipping material and packaging.		
13	Warranty and Support	The Products manufactured should provide warranty for 1 year from date of invoice.		
		Electrical items such as Sockets, switches, fans etc. should have warranty for 1 year from date of installation.		
		For malfunction of any units/item in the rack, the support should be provided within the next business day.		
		Warranty claim will be attended with in 2 or 3 working days.		

(B). 15U WALLMOUNT RACK SINGLE SECTION

SL NO	REQUIREMENTS	COMPLIANCE (YES / NO)	REMARKS
1	**General Requirements**		
	Rack should be designed to provide **Secure, Store, Streamline and Systemize IT Equipment's**		
	Racks should be manufactured out of steel sheet punched, formed, welded and powder coated		
	Rack should have 100% assured compatibility with all equipment's conforming to **DIN 41494** (General Industrial Standard for equipment's) or Equivalent **EIA /ISO / EN** Standard		
	Rack should have 2 No Adjustable, 19" verticals with Punched 9mm Square Hole and Universal 12.7mm-15.875mm-15.875mm alternating hole pattern offering greater mounting flexibility and maximizes usable mounting space		
	The Racks should be 15U Height, and 550mm in width and 500 in depth for Network application		
2	**Physical Specifications**		
	Rack should have below dimension;		
	Height should be 749		
	Width should be 550		
	Depth should be 500		
	Standard for Rack configuration should be welded frame integrated with side panel and vented top cover.		
3	**Equipment Access & Installation**		
	The front door should open to allow easy access.		

	Rack should have 1 Packet of mounting hardware, Pack of 20.		
4	**Material Requirements**		
	All weight bearing components should be made from steel with a thickness not less than 1mm		
	All sheet metal parts should be Pre-Treated and powder coated meeting ASTM Standard.		
5	**Grounding Requirements**		
	All enclosure components i.e., frame, and door should be bonded together and to rack ground point		
	OEM to provide rack ground point, Provision to further ground to Telecom Ground bus bar System Grounding and bonding as per UL Standards		
6	**Certifications, Environmental and Safety Requirements**		
	Racks should be manufactured by **ISO9001:2008, ISO14001:2004 & OHSAS18001:2007** Certified company and should have proper EHS Policy.		
	Products must be **UL** Certified		
	Manufacturer must certify that the products are **RoHS** Compliance		
	Manufacturer must certify that the products are Comply DIN41494 and Equivalent EIA/ISO/EN /CEA Standard.		
	The rack should comply minimum of IP 20 rating for protection against touch, ingress of foreign bodies and ingress of water.		
	The enclosure should both protect the user from mechanical hazards and generally meet the requirements for a mechanical enclosure (stability, mechanical strength, aperture sizes, etc.) as defined in IEC 60950 Third Edition.		
7	**Ventilation and Thermal Management**		
	The unit should have sufficient ventilation to provide adequate airflow required by the major Network manufacturers.		
	Provision to Fix Exhaust Fan on the top with 90CFM Fan		
8	**Rack Power Distribution Units & Environmental monitoring**		
	Rack should have 1 no. Power Distribution Units with 6No 5/15A Indian Round Pin with PDU Rating 3.6KVA		
9	**Cable Management**		
	Rack should have 1 no. Horizontal Cable Organizer 1u with plastic loops.		
	Rack should have provision for cable Entry and Exit from		

	both top and bottom		
10	**Accessories**		
	Shelving: - Rack should have 1 no. Cantilever Shelf for mounting NON-Rack mountable Equipment's.		
11	**Security**		
	Rack should have Front Toughened Glass Door with lock and key		
12	**Delivery & Installation** The unit should be shipped fully assembled as one orderable Unit.		
	The manufacturer should offer an inside-delivery shipping option which includes reasonable delivery to the inside of the building and removal and disposal of shipping material and packaging.		
	The Products manufactured should provide warranty for 1 year from date of invoice		
	Electrical items such as Sockets, switches, fans etc. should have warranty for 1 year from date of installation.		
	For malfunction of any units/item in the rack, the support should be provided within the next business day.		
	Warranty claim will be attended with in 2 or 3 working days.		

(C). 9U WALLMOUNT RACK SINGLE SECTION

SL NO	DETAILS	REQUIREMENTS	COMPLIANCE (YES / NO)	REMARKS
1	General Requirements	Rack should be designed to provide **Secure, Store, Streamline and Systemize IT Equipment's**		
		Racks should be manufactured out of steel sheet punched, formed, welded and powder coated		
		Rack should have 100% assured compatibility with all equipment's conforming to **DIN 41494** (General Industrial Standard for equipment's) or Equivalent **EIA /ISO / EN** Standard		
		Rack should have 2 No Adjustable, 19" verticals with Punched 9mm Square Hole and Universal 12.7mm-15.875mm-15.875mm alternating hole pattern offering greater mounting flexibility and maximizes usable mounting space		
		The Racks should be 9U Height, and		

		550mm in width and 500 in depth for Network application		
2	Physical Specifications	The Rack should have below dimension;		
		Height should be 481mm		
		Width should be 550mm		
		Depth should be 500		
		Standard for Rack configuration should be welded frame integrated with side panel and vented top cover.		
3	Equipment Access & Installation	The front door should open to allow easy access.		
		Rack should have 1 Packet of mounting hardware, Pack of 20.		
4	Material Requirements	All weight bearing components should be made from steel with a thickness not less than 1mm		
		All sheet metal parts should be Pre-Treated and powder coated meeting ASTM Standard.		
5	Grounding Requirements	All enclosure components i.e., frame, and door should be bonded together and to rack ground point		
		OEM to provide rack ground point, Provision to further ground to Telecom Ground bus bar System		
		Grounding and bonding as per UL Standards		
6	Certifications, Environmental and Safety Requirements	Racks should be manufactured by **ISO9001:2008, ISO14001:2004 & OHSAS18001:2007** Certified company and should have proper EHS Policy.		
		Products must be **UL** Certified		
		Manufacturer must certify that the products are **RoHS** Compliance		
		Manufacturer must certify that the products are Comply DIN41494 and Equivalent EIA/ISO/EN /CEA Standard.		
		The rack should comply minimum of IP 20 rating for protection against touch, ingress of foreign bodies and ingress of water.		
		The enclosure should both protect the user from mechanical hazards and		

		generally meet the requirements for a mechanical enclosure (stability, mechanical strength, aperture sizes, etc.) as defined in IEC 60950 Third Edition.		
7	Ventilation and Thermal Management	The unit should have sufficient ventilation to provide adequate airflow required by the major Network manufacturers.		
		Provision to Fix Exhaust Fan on the top with 90CFM Fan		
8	Rack Power Distribution Units & Environmental monitoring	Rack should have 1 no. Power Distribution Units with 6No 5/15A Indian Round Pin with PDU Rating 3.6KVA		
	Cable Management	Rack should have 1 no. Horizontal Cable Organizer 1u with plastic loops.		
		Rack should have provision for cable Entry and Exit from both top and bottom		
9	Accessories	Shelving: - Rack should have 1 no. Cantilever Shelf for mounting NON-Rack mountable Equipment's.		
10	Security	Rack should have Front Toughened Glass Door with lock and key		
11	Delivery & Installation	The unit should be shipped fully assembled as one orderable Unit.		
		The manufacturer should offer an inside-delivery shipping option which includes reasonable delivery to the inside of the building and removal and disposal of shipping material and packaging.		
12	Warranty and Support	The Products manufactured should provide warranty for 1 year from date of invoice,		
		Electrical items such as Sockets, switches, fans etc. should have warranty for 1 year from date of installation.		
		For malfunction of any units/item in the rack, the support should be provided within the next business day.		
		Warranty claim should be attended		

		with in 2 or 3 working days.		

(D). 6U WALLMOUNT RACK SINGLE SECTION

SL NO	DETAILS	REQUIREMENTS	COMPLIANCE (YES / NO)	REMARKS
1	General Requirements	Rack should be designed to provide **Secure, Store, Streamline and Systemize IT Equipment's**		
		Racks should be manufactured out of steel sheet punched, formed, welded and powder coated		
		Rack should have 100% assured compatibility with all equipment's conforming to **DIN 41494** (General Industrial Standard for equipment's) or Equivalent **EIA /ISO / EN** Standard		
		Rack should have 2 No Adjustable, 19" verticals with Punched 9mm Square Hole and Universal 12.7mm-15.875mm-15.875mm alternating hole pattern offering greater mounting flexibility and maximizes usable mounting space		
		The Racks should be 6U Height, and 550mm in width and 500 in depth for Network application		
2	Physical Specifications	The height of the rack should be347mm		
		The width of the rack should be 550mm		
		The depth of the rack should be 500mm		
		Standard for Rack configuration should be welded frame integrated with side panel and vented top cover		
	Equipment Access & Installation	The front door should open to allow easy access.		
3		Rack should have 1 Packet of mounting hardware, Pack of 20.		
	Material Requirements	All weight bearing components should be made from steel with a thickness not less than 1mm		
		All sheet metal parts should be Pre-Treated and powder coated meeting ASTM Standard.		
		All enclosure components i.e., frame,		

4	Grounding Requirements	and door should be bonded together and to rack ground point		
		OEM to provide rack ground point, Provision to further ground to Telecom Ground bus bar System		
		Grounding and bonding as per UL Standards		
5	Certifications, Environmental and Safety Requirements	Racks should be manufactured by ISO9001:2008, ISO14001:2004 & OHSAS18001:2007 Certified company and should have proper EHS Policy.		
		Products must be **UL** Certified		
		Manufacturer must certify that the products are **RoHS** Compliance		
		Manufacturer must certify that the products are Comply DIN41494 and Equivalent EIA/ISO/EN /CEA Standard.		
		The rack should comply minimum of IP 20 rating for protection against touch, ingress of foreign bodies and ingress of water.		
		The enclosure should both protect the user from mechanical hazards and generally meet the requirements for a mechanical enclosure (stability, mechanical strength, aperture sizes, etc.) as defined in IEC 60950 Third Edition.		
6	Ventilation and Thermal Management	The unit should have sufficient ventilation to provide adequate airflow required by the major Network manufacturers.		
		Provision to Fix Exhaust Fan on the top with 90CFM Fan		
7	Rack Power Distribution Units & Environmental monitoring	Rack should have 1 no. Power Distribution Units with 6No 5/15A Indian Round Pin with PDU Rating 3.6KVA		
8	Cable Management	Rack should have 1 no. Horizontal Cable Organizer 1u with plastic loops.		
		Rack should have provision for cable Entry and Exit from both top and bottom		
9	Accessories	Shelving: -		

		Rack should have 1 no. Cantilever Shelf for mounting NON-Rack mountable Equipment's		
10	Security	Rack should have Front Toughened Glass Door with lock and key		
11	Delivery & Installation	The unit should be shipped fully assembled as one orderable Unit.		
		The manufacturer should offer an inside-delivery shipping option which includes reasonable delivery to the inside of the building and removal and disposal of shipping material and packaging		
12	Warranty and Support	The Products manufactured should provide warranty for 1 year from date of invoice		
		Electrical items such as Sockets, switches, fans etc. should have warranty for 1 year from date of installation.		
		For malfunction of any units/item in the rack, the support should be provided within the next business day.		
		Warranty claim will be attended with in 2 or 3 working days.		

പ്രത്യേക നിബന്ധനകൾ

1. ടെൻഡർ അടങ്ങുന്ന കവറിന് പുറത്ത് ടെൻഡർ നമ്പർ തീയതി എന്നിവ രേഖപ്പെടുത്തേണ്ടതും. ഓണററി ഡയറക്ടർ, ഐ.ഐ.ആർ.ബി.എസ്, മഹാത്മാഗാന്ധി സർവ്വകലാശാല, പി.ഡി.ഹിൽസ് പിഒ. കോട്ടയം. 686560. എന്ന വിലാസത്തിൽ സമർപ്പിക്കേണ്ടതുമാണ്.

2. ടെൻഡർ സമർപ്പിക്കുന്നവർ അതിനു മുൻപ് നിർബന്ധമായും സൈറ്റ് സന്ദർശിക്കേണ്ടതാണ്

3. ടെൻഡർ സമർപ്പിക്കാൻ നിർദ്ദേശിക്കപ്പെട്ടിരിക്കുന്ന നിശ്ചിത സമയപരിധിക്ക് ശേഷം ലഭിക്കുന്ന ടെൻഡർ സ്വീകരിക്കുന്നതല്ല.

4. ടെൻഡർ തുറക്കുന്ന ദിവസം അവധി ആണെങ്കിൽ തൊട്ടടുത്ത പ്രവർത്തി ദിവസം അതേസമയം തുറക്കുന്നതാണ്. ടെൻഡർ മാറ്റി വെക്കുവാനോ കാരണം കാണിക്കാതെ തന്നെ നിരസിക്കുന്നതിനോ നിർവ്വഹണ ഉദ്യോഗസ്ഥന് അധികാരമുണ്ടായിരിക്കും.

5. എല്ലാവിധ നികുതിയും, പാക്കിങ്, ട്രാൻസ്പോർട്ടേഷൻ ചാർജ്ജ് മുതലായവ ടെൻഡർ തുകയിൽ ഉൾപ്പെടുത്തേണ്ടതാണ്.

6. എല്ലാ ജോലികളും ഉൾപ്പെടുത്തിയ ടെൻഡർ മാത്രമേ സ്വീകരിക്കുകയുള്ളൂ.

7. ജോലി പൂർത്തീകരിക്കുന്ന തീയതി മുതൽ ഒരു വർഷത്തേക്ക് വാറൻറി ബാധകമായിരിക്കും.

8. പണികൾ പൂർത്തിയാകുന്ന മുറയ്ക്ക് എല്ലാ ബില്ലുകളും (With GST) സമർപ്പിച്ചതിനു ശേഷം

സർവകലാശാലയിലെ എൻജിനിയറിങ് വിഭാഗം ഗ്രണനിലവാരം പരിശോധിച്ച് ഉറപ്പു വരുത്തി TDS കഴിച്ച് ബില്ല് പാസ്സാകുന്ന മുറയ്ക്കേ തുക അനുവദിക്കുകയുള്ളൂ

9. ടെൻഡർഫോറം, സർവകലാശാലയുടെ ഔദ്യോഗിക വെബ്സൈറ്റിൽ നിന്നും ഡൌൺലോഡ് ചെയ്യാവുന്നതാണ് (www.mgu.ac.in/ Downloads/Other Forms/Format of Tender Form)

10. ടെൻഡർ ഫോറത്തിൻറെ വില ഓൺലൈൻ പേയ്മെൻറ് മുഖേന അടയ്ക്കേണ്ടതും പണമടച്ചതിൻറെ രസീത് ടെൻഡറിനോടൊപ്പം സമർപ്പിക്കേണ്ടതുമാണ്

11. ടെൻഡറിനോടൊപ്പം ഉള്ളടക്കം ചെയ്യുന്ന നിരതദ്രവ്യം, ഓൺലൈൻ പേയ്മെൻറ് സംവിധാനത്തിലൂടെ (www.mgu.ac.in-Online Payment-Miscellaneous) മാത്രമേ സ്വീകരിക്കുകയുള്ളൂ

12. ടെൻഡറുകൾക് രണ്ട് മാസത്തെപ്രാബല്യം ഉണ്ടായിരിക്കും.

13. 200 രൂപയുടെ മുദ്രപത്രത്തിൽ പ്രിലിമിനറി എഗ്രിമെൻറ് സമർപ്പിക്കേണ്ടതാണ്.

14. ടെൻഡറിനോടോപ്പം മോഡലിൻറെ ചിത്രങ്ങൾ സമർപ്പിക്കുന്നത് അഭികാമ്യമാണ്.

15. ടെൻഡർ ഉറപ്പിച്ചു കഴിഞ്ഞാൽ കരാറിനൊപ്പം ആകെ തുകയുടെ 5 % കൂടുതൽ നിക്ഷേപം സമർപ്പിക്കേണ്ടതാണ്

ടെൻഡർ സ്വീകരിക്കുന്ന അവസാന തീയതി :- 13.01.2023
സമയം: 12.00 PM ന് മുൻപായി സമർപ്പിക്കേണ്ടതാണ്.
ടെൻഡർതുറക്കുന്ന സമയം : 2.30 PM നു ശേഷം 13.01.2023.

ടെൻഡർഫോറംവില : 580 /- രൂപ
നിരതദ്രവ്യം : ടെൻഡർ തുകയുടെ 1 %

ഫോൺ നമ്പർ - 0481 2731445

Dr. ANAS .
Honorary Director IIRBS