

TECHNICAL BID (PART - I)

AMENDED
निविदा दस्तावेज
TENDER DOCUMENT

के लिये
FOR

DATA CENTER SERVER RACKS INTEGRATED WITH
RACK BASED POWER DISTRIBUTION SYSTEM,
CLOSED LOOP COOLING USING LIQUID COOLING
PACKAGE, FIRE SAFETY AND MONITORING SYSTEMS
AND UPS SYSTEM UNDER LAB RENOVATION




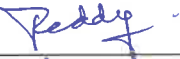



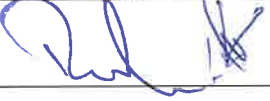

TENDER # PUR/APF/2019-20/IND13336



सी डी एफ डी
CDFD

डी एन ए फिंगरप्रिंटिंग एवं निदान केंद्र
Centre for DNA Fingerprinting and Diagnostics
इन्तर रिंग रोड, उप्पल, हैदराबाद - 500039
Inner Ring Road, Uppal, HYDERABAD - 500039
(तेलंगाना राज्य) भारत
(Telangana State) India

ATTENDANCE SHEET for CDFD/PUR/APF/2019-20/IND13336
Data Center Server
PRE- Bid Meeting

S.No.	Name of the Quoted Firm	Name of the Firm Employee	Signature
1	Alok Tiwari	Delta Electronics India Pvt	
2	STUHZ	owner. M.K	
3	M. Seetharam CRID2chip	M. Seetharam	
4	FASTLANE INFORMATION TECHNOLOGIES	Pavan Reddy B	
5	W.A. Rajan	Durga Prasad G.	
6	John Basha Sheik	Delta Electronics India Pvt	
7	SAS RAY PERE	front power solutions & systems	
8	Chaitanya R. K Hittal India Pvt Ltd.	Chaitanya R K	
9	Gowda bits & bytes	Sunit.	
10	Asha Gulipati Indhe	S. Venkatesh Nenguna	
11	S. N. RAUHAN/RAJANI FRONTIER BUSINESS SYSTEMS P. LTD	S. N. RAUHAN/RAJANI	

CENTRE FOR DNA FINGERPRINTING AND DIAGNOSTICS, HYDERABAD

PRE-BID MEETING FOR TENDER - DATA CENTER SERVER RACKS INTEGRATED WITH RACK BASED POWER DISTRIBUTION SYSTEM, CLOSED LOOP COOLING USING LIQUID COOLING PACKAGE, FIRE SAFETY AND MONITORING SYSTEMS AND UPS SYSTEM UNDER LAB RENOVATION

Tender No. PUR/APF/2019-20/IND13336 Dt. 05.02.2020

PRE-BID MEETING Dt. 20.02.2020 QUERIES AND AMENDMENTS/RESPONSES

S. No.	Tender Page No	CDFD Tender Description	Pre-Bid Queries	CDFD Amendment/Response
1	Page 2 & 3 Points 8,9,11,12	Due Date for Receipt of Tenders: 12.03.2020 @ 2.30pm. Opening of Technical Bids: 12.03.2020 @ 3.00pm at CDFD, Inner Ring Road, Uppal, Hyderabad-500039.		Amendment : Due Date for Receipt of Tenders: 23.03.2020 @ 2.30pm. Opening of Technical Bids: 23.03.2020 @ 3.00pm at CDFD, Inner Ring Road, Uppal, Hyderabad-500039.
2	Page 4 & 14	The Bidder should be in the similar business for the last 5 years and have successfully supplied and executed at least One similar equipment to any of the Department of State / Central / PSU/ University / R & D Institutes / Pharmaceutical Laboratories / Public limited Companies during the last 5 years. Similar Equipment means Data Center Server Racks Integrated with Rack based Power Distribution system, closed Loop Cooling using Liquid cooling Package, Fire Safety and Monitoring Systems and UPS System under Lab Renovation. Proof to be enclosed with the quote.	Read as the Bidder / OEM should be in the similar business for the last 5 years and have successfully supplied and executed at least One similar equipment to any of the Department of State / Central / PSU/ University / R & D Institutes / Pharmaceutical Laboratories / Public limited Companies during the last 5 years. Similar Equipment means Data Center Server Racks with Power Distribution system," Chilled water based Cooling solution" Fire Safety and Monitoring Systems and UPS System any existing building facility Proof to be enclosed with the quote. (Stulz)	Amendment : The Bidder should be in the similar business for the last 5 years and have successfully supplied and executed at least One similar equipment to any of the Department of State / Central / PSU/ University / R & D Institutes / Pharmaceutical Laboratories / Public limited Companies during the last 5 years. Similar Equipment means Data Center Server Racks Integrated with Rack based Power Distribution system, closed Loop Cooling using Liquid cooling Package / Chilled water based Integrated cooling Rack, Fire Safety and Monitoring Systems and UPS System under Lab Renovation. Proof to be enclosed with the quote.

3	Page 4 & 14	The bidding OEM/bidder should have successfully executed at least one work of Rs. 44,00,000/- capacity and two works of Rs. 33,00,000/- and three works of Rs. 22,00,000/- during any one of the preceding five financial years using the architecture and technologies similar to those being proposed in their proposal against this tender with same OEM or different OEMs.	Read as OEM / bidder should have successfully executed at least one work of Rs. 44,00,000/- capacity and two works of Rs. 33,00,000/- and three works of Rs. 22,00,000/- during any one of the preceding last five financial years using the architecture and technologies similar to those being proposed in their proposal against this tender with same OEM or different OEMs. (Stulz)	No Change
4	Page 17	Surface Finish: Nano Ceramic Coated, electro-dipcoat primed to 20 microns and powder coated with textured polyester RAL 7035 to 80 to 120 microns.	OEM Specific RAL 7035 (White), we propose RAL 7021 (Black) this will not impact on overall solution (Frontier) Powder coated with polyester paint RAL 7035 as per OEM standard and design (Stulz)	Amendment: Surface Finish: Nano Ceramic Coated, electro-dipcoat primed to 20 microns or powder coated with textured polyester RAL9005 / RAL7035 / RAL7021 as per OEM design and standard.
5	Page 17	The Data center should be equipped with Liquid Cooling package System	OEM specific nomenclature, This Solution Requirement is Chilled water based PAC which doesn't need to be on LCP. (Frontier) Read as Chilled water based smart rack solution (Stulz)	Amendment: The Data center should be equipped with Liquid Cooling package System / Chilled water based Integrated cooling Rack
6	Page 17	Each liquid cooling system should be a closed unit consisting of a cooling system and be able to cool minimum of one or two server enclosures.	If the cooling unit is only capable to cool one or two adjacent racks. Failure of any unit may lead to increase in temperature of the adjacent racks as other cooling units will not be able to cater the heat load of those racks. Future Expansion beyond 3 rack can be easily done without adding any additional Air Booster fan (Frontier)	No Change
7	Page 17	Leveling feet	can be replaced with 100mm plinth provided below the unit (Stulz)	Amendment: Leveling feet / 100 mm plinth
8	Page 17	ISO 9001, 14001, 18001. Complying EIA 310, DIN 41494 and IEC 297 standards	OEM Specific (Frontier)	Amendment: All Racks offered should be from a company certified according to ISO 9001, 14001, 18001 and offered racks should be as per Industry Standards

9	Page 17	63A 3 Phase input with single phase output Vertical (Ammeter/phase) Metered PDUs with minimum 24 Nos IEC 320 socket C13 Ports and 6 Nos of IEC 320 Socket C19 ports	OEM Specific (Frontier)	Amendment: 32A 3 Phase / 63A 1 Phase input with single phase output Vertical (Ammeter/phase) Metered PDUs with minimum 24 Nos IEC 320 socket C13 Ports and 6 Nos of IEC 320 Socket C19 ports
10	Page 17	The integrated air/water heat exchanger should guarantee a cooling output of up to 55 KW, combined with standard server enclosure dimensions, the lowest possible weight and comprehensive possibilities for monitoring.	As pe Prebid total Cooling requirement if 55 KW (Frontier)	Amendment: 4.0 Closed loop cooling solution: (2) No's Construction of the device optimized for data centers. The integrated air/water heat exchanger ensures a cooling output of up to 55 / 60 kW per each cooling solution with standard server enclosure dimensions, the lowest possible weight and a comprehensive monitoring option.
11	Page 18	The unit should be capable of providing cooling for either one or two server racks.	Requirement is for 3 Racks, Requirement is for 3 Racks hence 1/2 will be insufficient. We can even go beyond 3 racks (Frontier)	No Change
12	Page 18	Fans should be exchangeable at any time in a matter of seconds, also during operation (hot swapping).	Removing a fan online is not advisable as PAC's are provided with redundancy. Redundancy is provided on cooling machine level and not on fan level so not required. also on a safety ground fan replacement on a live machine is not recommended (Frontier)	Deleted
13	Page 18	Optional: To enable the displaying of all physical parameters, an optical colour touch screen should be integrated into the front of the unit.	OEM Specific - Touch Screen Display is not a standard offering, We Can Provide HMI which is advanced than the requirement (Frontier)	Amendment: Optional: To enable the displaying of all physical parameters, an optical colour touch screen / HMI should be integrated into the front of the unit.

14	Page 19	Minimum 80 KVA Usable capacity using minimum 20 KVA modules with N+1 redundancy with 0.99 PF	Favouring specific OEM : DELTA, We Can Offer Modular UPS (Maximum capacity can be 60/90KVA UPS scalable to 150KVA/KW with 30KVA/Kw modules) this is with grater capacity, more efficient and with modern Server Requirement of unity power factor (Frontier)	Amendment: Minimum 80 KVA Usable capacity using minimum 20 KVA modules with N+1 redundancy with 0.99 PF / Unity PF
15	Page 19	System should have inherent intelligence of the modules these should be integrated during running operation. This means that the system can be extended at any time.	UPS scalability not mentioned, Our UPS is scalable to 150KVA/KW as capacity or 120KVA/KW (N+1) redundant (Frontier)	Amendment: System should have inherent intelligence of the modules these should be integrated during running operation. This means that the system can be extended at any time. (Scalable to 100/120KVA)
16	Page 21	Basic Structure: Frame Of sturdy frame section construction, consisting of multi folded (minimum 9 fold) x folded rolled hollow frame section punched in 25mm DIN pitch pattern.	OEM Specific, Frame Structure is Multifold (Frontier)	Amendment: Basic Structure: Frame Of sturdy frame section construction, consisting of multi folded rolled hollow frame section punched in 25mm DIN pitch pattern.
			Consisting of multi folded frame section / standard server integrated rack to meet customer HPC requirement. (Stulz)	
17	Page 21	Horizontal Earthing Busbar per cabinet, 20 point for earth connection.	OEM Specific, Busbar with 10 Points is equivalently good (Frontier)	Amendment: Horizontal Earthing Busbar per cabinet, 10 to 20 point for earth connection.
18	Page 21	IP54 protection rating when installed (joined to neighboring cooling unit for closed loop).	OEM Specific, for Indoor application IP54 is not required IP50 is mote than sufficient (Frontier)	Amendment: IP50 or better protection rating when installed (joined to neighboring cooling unit for closed loop).
			Racks will be with IP54 protection complaine for front and back door, however the cable entry from top leaves it prone to possible leakage, it is recommended to dummy the existing sprinkler system above the Server Racks. (Stulz)	
19	Page 21	Load bearing capacity: 1500KG at Frame & 1000 KGs. On 19" mounting angles.	OEM Specific, 1000 Kgs on 19" mounting angles is standard offering (Frontier)	Amendment: Load bearing capacity: 1000 KGs. On 19" mounting angles.
			Rack load bearing capacity 1000 KGs (Stulz)	
20	Page 21	Surface Finish: Nano Ceramic Coated, electro-dipcoat primed to 20 microns and powder coated with textured polyester RAL 7035 to 80 to 120 microns.	OEM Specific, we propose RAL 7021 (Black) this will not impact on overall solution (Frontier)	Amendment: Surface Finish: Nano Ceramic Coated, electro-dipcoat primed to 20 microns or powder coated with textured polyester RAL9005 / RAL7035 / RAL7021 as per OEM design and standard.

21	Page 21	All Racks should be certified according to ISO 9001, 14001, 18001. Complying EIA 310, DIN 41494 and IEC 297 standards	Company is ISO 9001, 14001, 18001 certified and racks provided are as per industry standards. (Stulz)	Amendment: All Racks offered should be from a company certified according to ISO 9001, 14001, 18001 and offered racks should be as per Industry Standards
22	Page 22	4.0 Closed loop cooling solution: (2) No's Construction of the device optimized for data centers. The integrated air/water heat exchanger ensures a cooling output of up to 55 kW with standard server enclosure dimensions, the lowest possible weight and a comprehensive monitoring option.	OEM Specific, We Can offer better capacity of up to 60KW with 600mm (W) and can achieve 9000 CMH with 3 Fans (Frontier)	Amendment: 4.0 Closed loop cooling solution: (2) No's Construction of the device optimized for data centers. The integrated air/water heat exchanger ensures a cooling output of up to 55 / 60 kW per each cooling solution with standard server enclosure dimensions, the lowest possible weight and a comprehensive monitoring option.
23	Page 22	Maximum efficiency is achieved and the consumption of electrical energy is minimized by using four built-in EC fan modules This provides investment security if the full cooling output does not need to be used at the beginning of the installation.	OEM Specific, we offer 3 fans (Frontier)	Amendment: Maximum efficiency is achieved and the consumption of electrical energy is minimized by using minimum three built-in EC fan modules This provides investment security if the full cooling output does not need to be used at the beginning of the installation.
24	Page 22	The device is ready to take a maximum of six EC fan modules. A full fan configuration is therefore possible for reasons of redundancy or to minimise electrical power consumption.	OEM Specific, we offer 3 fans (Frontier)	Amendment: The device is ready to take three to six EC fan modules. A full fan configuration is therefore possible for reasons of redundancy or to minimise electrical power consumption.

25	Page 22	Technical details: Sensitive cooling output with four/five/six fans: 48/51/53 kW Installed fans: 6 Volumetric air flow: 8,000 m ³ /h (6 fans) Cooling output (six fans): 53 kW	OEM Specific, Our Offering details: Sensitive cooling output with three fans: 56.3 kW Installed fans: 3 Volumetric air flow: 9,000 m ³ /h (3 fans) Design Cooling output (three fans): 60 kW (Frontier)	Amendment: Technical details: Sensitive cooling output with four/five/six fans: 48/51/53 kW or 3 fans with 56.3 kW Installed fans: 3 - 6 Volumetric air flow: 8,000 - 9000 m ³ /h (3 - 6 fans) Cooling output (3 - 6 fans): 53 - 60 kW
26	Page 22	The integrated air/water heat exchanger ensures a cooling output of upto 55kw with standard server enclosure.	The total cooling solution required including redundancy is 55kw that is 2 nos of 27.5KW cooling units (1Working +1Standby). We will offer same capacity and configuration equivalent. (Stulz)	Amendment: The integrated air/water heat exchanger ensures a cooling output of upto 55kw/60kw per each cooling system with standard server enclosure. (Total capacity with redundancy is 110kW)
27	Page 22	Max Air inlet temperature 25 Deg. C	Our supply air temperature will be 22 to 25 Deg. C (Stulz)	Amendment: Max Air inlet temperature 22 - 25 Deg. C
28	Page 23	Colour: RAL 7035	OEM specific colour code, RAL7021 (Black) (Frontier)	Amendment: Colour: RAL9005 / RAL7035 / RAL7021
29	Page 23	Dimensions: W x H x D: 300 x 2000 x 1500 mm or more Weight as delivered: approx. 260 kg	OEM specific, Dimensions: W x H x D: 600 x 2000 x 1800 mm Weight as delivered: approx. 300 kg (Frontier)	Amendment: Dimensions: W x H x D: 300/600 x 2000 x 1500/1800 mm Weight as delivered: approx. 260 - 300 kg
30	Page 23	Emergency automatic rear door opening kit in case of cooling failure/high temperature alarm must be provided.	OEM specific, Rear Opening will be insufficient as front door need to be open for supply air to HPC. Rear should have active fans which can remove the hot Air from Racks (Frontier) OK (Stulz)	Amendment: Emergency automatic rear door opening kit or equivalent hot air management kit in case of cooling failure/high temperature alarm must be provided.
31	Page 23	Max. connected electrical load: (three fan modules): 1050 W	OEM specific Total power consumption will be with 6 fans are 2100W, Total power consumption with higher air floor is only 1390W (Frontier)	Amendment: Max. connected electrical load: (three / six fan modules): 1050 - 2100 W
32	Page 23	PDU Input current: 63A 3 Ph	It is very high, each PDU would be about 40KVA capacity, recommendation is 32A / 16A (Stulz)	Amendment: PDU Input current: 32A 3 Phase / 63A 1 Phase

33	Page 27	Access control - Biometric reader for front door	OEM specific, We provide batter option with both Front and Back as back side is more critical (Frontier)	Amendment: Access control - Biometric reader for front/rear door or both doors
34	Page 27 & 28	300mm Cable basket for Management of Vertical Cables	OEM specific, 100 mm is more then sufficient (Frontier)	Amendment: 100 - 300mm Cable basket for Management of Vertical Cables
35	Page 28	Fire Suppression system: In built Suppression system with novec1230 gas cylinder with automatic gas release tube.	OEM specific, GAS release tube is only on temperature based it is not recommended for DC. Datacentre need Smoke detection also. We offer better solution for fire suppression in utility panel which will cover entire rack area, electrical panel area in utility panel with cross zoning Smoke detection and superession sustem (Frontier)	Amendment: Fire Suppression system: In built Suppression system with novec1230 gas cylinder with automatic gas release tube/ Smoke detection system

TECHNICAL BID (PART - I)**डी एन ए फिंगरप्रिंटिंग एवं निदान केंद्र**

(बायोटेक्नोलॉजी विज्ञान और प्रौद्योगिकी मंत्रालय एक स्वायत्त संस्थान। भारत सरकार)

CENTRE FOR DNA FINGERPRINTING AND DIAGNOSTICS

(An Autonomous Institute of Department of Biotechnology, Ministry of Science and Technology, Govt. of India)

इनर रिंग रोड Inner Ring Road, उप्पल Uppal, हैदराबाद HYDERABAD - 500039 (तेलंगाना राज्य (Telangana State) भारत India)

Ph. No. 040-27216026/20, Fax: 040-27216019 Email: purchase@cdfd.org.in**निविदा आमंत्रित सूचना
NOTICE INVITING TENDER****Tender No. PUR/APF/2019-20/IND13336****Date: 05.02.2020**

Sealed tenders in **TWO BID SYSTEM** are invited on behalf of and by the Director, CDFD for Supply, Installation and Commissioning of "Data Center Server Racks integrated with Rack Based Power Distribution System, Closed Loop Cooling using Liquid Cooling Packages, Fire Safety and Monitoring Systems and UPS System under Lab Renovation"

काम की गुंजाइश Scope of work: Supply, Installation and Commissioning of "Data Center Server Racks integrated with Rack Based Power Distribution System, Closed Loop Cooling using Liquid Cooling Package, Fire Safety and Monitoring Systems and UPS System under Lab Renovation"

1. **इच्छुक योग्य बोलीदाता हमारी वेबसाइट से पूर्ण बोली-प्रक्रिया दस्तावेज मुफ्त में डाउनलोड कर सकते हैं।** Interested eligible bidders may download the complete bidding documents from our Website (<http://www.cdfd.org.in>) as well as from **Central Public Procurement Portal: www.eprocure.gov.in**.
2. **Details of Tender: Cost of the Tender Documents: Rs. 1500/- (Rupees One Thousand Five Hundred Only) through DD in favour of The Director, CDFD, Hyderabad.**
3. Interested eligible bidders may download the complete bidding documents from our Website (<http://www.cdfd.org.in>) from **09.02.2020 onwards** (back to back printing). All such downloaded tender documents should be accompanied by a **non-refundable** DD for Rs.1500/- (Rupees One Thousand Five hundred only) towards the cost of Tender document. The cost of Tender documents should be paid by DD in favour of The Director, CDFD, Hyderabad and no other mode of payment will be accepted.
4. The Tender document fee of Rs. 1500/- to be provided is a separate Demand Draft in favour of The Director, CDFD, Hyderabad.
5. The Tender document fee should not be clubbed with EMD amount for technical reasons.
6. No Exemption is allowed for payment of Tender document fees irrespective of Registration with DGS & D, MSME, NSIC etc.
7. **कम से कम धन जमा / बोली सुरक्षा Earnest Money Deposit/Bid Security:** E.M.D. amounting to Rs. 1,10,000/- (Rupees One lakh ten Thousand only) by way of Demand Draft / Bank Guarantee of a commercial bank in favour of "Director, CDFD and payable at Hyderabad obtained from any Commercial Bank, should be enclosed along with the Bid.
 - a. The BG should be valid for 6 months.
 - b. This amount is interest free and will be returned to the unsuccessful bidder after finalization of the Contract within 30 days.
 - c. The firms registered with NSIC and MSE if any, are exempted from payment of Earnest Money Deposit (EMD) and enclose the valid proof along with Quotation.
8. **Tenders shall be submitted in 2-PARTS:** 1) PART – I : Technical Bid 2) PART – II : Price Bid
 - Technical Bid (PART – I) of the Tender must contain the documents as indicated at **Clause No. 11 of Instructions to Bidder**.
 - **Price Bid (PART – II) of the Tender shall contain only the Price Schedule as per the Price Schedule Format (both in words and figures).** The Bidder should ensure that the Prices are mentioned only in the Price Bid and nowhere in the Technical Bids.
 - **Due Date for Receipt of Tenders: 18.05.2020 @ 2.30pm. Opening of Technical Bids: 18.05.2020 @ 3.00pm at CDFD, Inner Ring Road, Uppal, Hyderabad-500039.**
 - If the above stated opening or closing date(s) happens to be Govt. holiday(s)/BANDH, the submission/opening of the tender will be on the next working day as per the time scheduled.
9. Bidder shall seal the Technical Bids and Price Bids in two separate envelopes duly marked / super-scribed as "Technical Bid (Part-I)" and "Price Bid (Part-II)" – Tender No: **CDFD/PUR/APF/2019-20/IND13336 due on 18.05.2020 at 2.30pm.**
 - The above two separate sealed covers, one containing the Part-I Technical Bid along with the EMD and the other containing, the Price Bid (Part-II) shall be kept together in another Cover which should also be sealed and super-scribed as above and addressed to the I/c – Stores & Purchase, Centre for DNA Fingerprinting and Diagnostics, Inner Ring Road, Uppal, Hyderabad – 39.

Contd....

TECHNICAL BID (PART - I)

- The sealed cover duly super-scribed with Tender No. **CDFD/PUR/APF/2019-20/IND13336 due on 18.05.2020 @ 2.30pm** containing Technical bid (Part-I) and Price Bid (Part-II) along with the relevant documents should be dropped in the **Sealed Tender Box kept at the Purchase Section, Inner Ring Road, Uppal, Hyderabad-39 on or Before 2.30 PM of 18.05.2020.** The Tender document at any cost should not be handed over to any persons.
10. The firms registered with MSME/MSEs should indicate the Udyog Aadhar Memorandum (UAM) Identification Number in their quotation failing which the exemption of EMD and other benefits as available will not be applicable.
 11. **निविदाएं दो बोली में जमा की जाएंगी | Tenders shall be submitted in Two bid**
Due Date for Receipt of Tenders: 18.05.2020 @ 2.30pm
Opening of Technical Bids: 18.05.2020 @ 3.00pm at Committee Room, CDFD, Inner Ring Road, Uppal, Hyderabad. Interested bidders may witness the tender opening on the above mentioned date and time.
 If the above stated opening or closing date(s) happens to be Govt. holiday(s)/BANDH, the submission/opening of the tender will be on the next working day as per the time scheduled.
 12. The sealed cover duly super-scribed with Tender No. **CDFD/PUR/APF/2019-20/IND13336 Due on 18.05.2020 @ 2.30pm** containing bid along with the relevant documents should be dropped in the Sealed Tender Box kept at the Purchase Section, CDFD, Inner Ring Road, Uppal, Hyderabad on or Before 2.30 PM of 18.05.2020. The Tender document at any cost should not be handed over to any persons.
 13. **प्री - बिड बैठक PRE-BID MEETING:** 20.02.2020 @ 11.00am at Committee Room, Purchase Section, CDFD, Hyderabad. The minutes of the Pre-Bid meeting displayed on CDFD website. No individual correspondence will be sent.
 14. **प्री - बिड प्रश्न PRE-BID QUERIES:** : All the vendors / OEMs would like seek clarifications on the bidding documents may forward to a email to purchase@cdfd.org.in on or before **14.02.2020**
 15. CDFD does not bind itself to accept the lowest or any other tender and reserves the authority to reject any or all tenders without assigning any reason. All the tenders, in which any of the prescribed conditions are not fulfilled or incomplete, in any respect, are also liable to be rejected.
 16. **Bidders sending their quotations through courier / postal services should ensure to send the same well in advance as CDFD does not take any responsibility for late receipt of quotes due to postal / courier delays.**
 17. **Tenders submitted without EMD will be rejected.** Tenders received after due date and time will not be entertained. Institute is not responsible for any postal delay. CDFD does not take any responsibility for loss of Tender in transit sent by courier or any postal delays, Tenders received after the due date and time will be summarily rejected. Incomplete or conditional tenders are liable for rejection.
 18. All the tenders, in which any of the prescribed conditions are not fulfilled or incomplete in any respect are liable to be rejected.

हस्ताक्षर

प्रभारी-भण्डारण एवं क्रय
Sd/-
I/C-Stores & Purchase

अध्याय CHAPTER 1

बोली लगाने के लिए निर्देश INSTRUCTIONS TO BIDDER

1. **योग्य बोलीदाता ELIGIBLE BIDDERS:** This Invitation for Bids is open to all Original Manufacturers/ their Authorized Dealers/ vendors / suppliers to quote on their behalf for this tender as per Manufacturer's Authorization Form and Indian Agents of Foreign Principals, if any who possess the qualifying requirements as specified in the Tender.
2. Bidders should not be associated, or have been associated in the past, directly or indirectly, with a firm or any of its affiliates which have been engaged by the Purchaser to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the goods to be purchased under this Invitation of Bids.
3. **बोलीदाता की क्षमता CAPACITY OF BIDDER:** any person signing a Tender shall submit documentary evidence that his signature on the Tender, submitted by him, is legally binding upon himself, his firm. If it is detected that the person so signing the Tender has no authority to do so, the Director, CDFD may, without prejudice to other civil and criminal remedies, not consider the Tender and hold the signatory liable for all costs and damages. The bidder shall produce a certificate from the Manufacturer of the offered product that they are the authorized dealer in India.
4. The Bidder should be a manufacturer or their dealer specifically authorized by the manufacturer to quote on their behalf of this tender as per manufacturer authorization form and Indian agents of foreign principals, if any who must have designed, manufactured, tested and supplied the equipment(s) similar to the type specified in the "Technical Specification". Such equipments must be of the most recent series/models incorporating the latest improvements in design. The models quoted should be in successful operation for at least one year as on date of Bid Opening in India and is engaged in the day to day usage.

बोलीदाता का हस्ताक्षर
Sign. of Bidder

TECHNICAL BID (PART - I)

5. The Indian Agents of foreign manufacturers / suppliers quoting directly on behalf of their principals for items appearing in the restricted list of the current Foreign Trade Policy must be registered with DGS&D. One Indian Agent cannot represent two different foreign principals for the same item in one tender.

6. **योग्यता मापदंड QUALIFICATION CRITERIA:**

1. The Bidder should be in the similar business for the last 5 years and have successfully supplied and executed at least One similar equipment to any of the Department of State / Central / PSU / University / R&D Institutes / Pharmaceutical Laboratories / Public Limited Companies during the last 5 years. Similar Equipment means Supply and Installation of **Data Center Server Racks Integrated with Rack based Power Distribution system, closed Loop Cooling using Liquid cooling Package, Fire Safety and Monitoring Systems and UPS System under Lab Renovation etc..** Proof to be enclosed with the quote.
2. The bidding OEM/partner should have successfully executed atleast one similar work of Rs. 44,00,000/- and two works of Rs. 33,00,000/- and three works of Rs. 22,00,000/- during any one of the preceding last five financial years using the architecture and technologies similar to those being proposed in their proposal against this tender with same OEM or different OEMs.
3. The OEM/partner should have the experience in building Data Centers in Indian Data center Market atleast 3 years with logistics facility for easy access and availability of spares in India to ensure the proper back-end support for smooth execution and post-sale support operations. Documentary proofs should be attached.
4. All warranty and support must be serviced directly by the OEM. CDFD requires that there be a Single Point Of Contact (SPOC) from OEM/Vendor who is responsible for all issues between CDFD and the OEM.
5. Bidder should be either an Original Equipment Manufacturer (OEM) or should be authorized System Integrator Partner having back to back Support Agreement with the OEM. Manufacturer's Authorization Form (MAF) for participating in this tender is mandatory for bidders and should be attached along with technical bid
6. OEM should have a local service center in Hyderabad. Documentary proofs should be enclosed.
7. The OEM must have an India based support infrastructure by maintaining a local spares depot in the country. This is to ensure immediate delivery of spare parts from OEM to its channel partner/system integrator.
8. The complete proposed solution must have all encompassing comprehensive onsite warranty of 3 years for all UPS and associated components is mandatory.
9. Products offered should have official OEM support for next three years from the date of acceptance of installation.
10. All quotations submitted must follow the prescribed format for technical compliance as in document below. Failure to do will result in the quotation being summarily rejected
11. One bidder can propose only one technical solution and the price bid for the same should be submitted. Quoting of multiple technical solutions with multiple price bids will result in the quotation being summarily rejected.
12. That the Bidder will assume total responsibility for the fault-free operation of equipment, application software, if any, and maintenance during the warranty period and provide necessary maintenance services after end of warranty period if required.
13. The bidder should be free from all encumbrances and possess adequate resources for executing the contract in the case it is awarded.

7. **बोली दस्तावेजों की सामग्री CONTENT OF BIDDING DOCUMENTS:** The goods required, bidding procedures and contract terms are prescribed in the bidding documents. The bidding documents, apart from the invitation for bids have been divided into 6 chapters as under:

1. Chapter 1 :Instructions to Bidder
2. Chapter 2: Detailed Terms & Conditions
3. Chapter 3 :Specifications and Allied Technical Details of the Goods and Services
4. Chapter 4 :Price Schedule Format
5. Chapter 5 :Other Formats

The Bidder is expected to examine all instructions, forms, terms & conditions and specifications in the bidding documents. Failure to furnish all information required by the bidding documents or submission of a bid not substantially responsive to the bidding documents will be at the Bidder's risk and may result in rejection of its bid.

8. **बोली दस्तावेजों का स्पष्टीकरण CLARIFICATION OF BIDDING DOCUMENTS :** A prospective Bidder requiring any clarification of the Tender Document shall contact the Purchaser in writing. The Purchaser will respond in writing to any request for clarification, provided that such request is received not later than 7 days prior to the deadline for submission of bids.

9. **बोली दस्तावेजों का संशोधन AMENDMENT OF BIDDING DOCUMENTS :** At any time prior to the deadline for submission of bids, the Purchaser may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the bidding documents by amendment. In order to allow prospective bidder's reasonable time in which to take the amendment into account in preparing their bids, the Purchaser, at its discretion, may extend the deadline for the submission of bids and host the changes on the website of the purchaser.

बोलीदाता का हस्ताक्षर
Sign. of Bidder

TECHNICAL BID (PART - I)

10. **बोली की भाषा LANGUAGE OF BID:** The bid prepared by the bidder, as well as all correspondence and documents relating to the bid exchanged by the bidder and the purchaser, shall be written in Hindi/English language only.
11. **बोली के साथ संलग्न दस्तावेज DOCUMENTS TO BE ENCLOSED WITH TECHNICAL BID (PART-I):** The bid prepared by the bidder, as well as all correspondence and documents relating to the bid exchanged by the bidder and the purchaser shall be written in Hindi/English language only.
- i. Tender Cost @ Rs. 1,500/- in form of DD.
 - ii. Bid Form as per format given at ANNEXURE-A.
 - iii. Detailed quotation along with Terms and Conditions except for Price Bid details.
 - iv. Manufacturer's Authorization Form as per format given at ANNEXURE-B.
 - v. Bid Security / EMD as per format given at ANNEXURE-C.
 - vi. Photocopies of two purchase orders of the quoted model / Installation Reports.
 - vii. Copies of Firm or VAT or TOT / Registration etc.
 - viii. GST Registration
 - ix. Non-Blacklisting Certificate
 - x. Performance Certificate as per format given at ANNEXURE-F.
 - xi. Compliance statement indicating yes/No as per CDFD specifications
 - xii. All necessary catalogues/technical literature, data as are considered essential for full and correct evaluation of offers.
 - xiii. Availability of number of trained support personnel, both application & service support.
 - xiv. CDFD Tender document duly signed by the bidder on all the pages.
 - xv. Check List as ANNEXURE-G.

Tender Cost should be submitted separately without mixing with EMD Amount

Note: Your Bid will be rejected if all the above enclosures are not attached with the Technical Bid without seeking any further clarifications from you.

12. **PURCHASE PREFERENCE:** Public Procurement order (preference to Make in India, 2017) issued by Department of Industrial Policy and Promotion, Ministry of Commerce & Industry, Govt. of India vide order No. P-45021/2/2017-PP (BE II) dated 15.06.2017, 28/05/2019 and orders issued vide F. No. 33(1)/2017-IPHW of Government of India, Ministry of Electronics and Information Technology dated 14.09.2017 shall be taken into consideration in procurement of these goods.

The eligible suppliers as per the above orders shall produce self-certificate of local content of 50% as per above order guidelines to be considered as Local Supplier. The detailed directives on these guidelines are attached as Annexure – I and Annexure II

In addition to the above, the purchasing authority shall also consider the latest guidelines issued by CVC, GFR 2017 and Manual for Procurement of Goods and Services 2017 in procurement of these goods.

13. **Non-Blacklisting Certificate:** The bidding firm has to give a self-certificate on their letter head to the effect that it has not been blacklisted / debarred / suspended by any department of State / Central / PSU / University / R & D Institutes etc., If it is subsequently established or found that the bidding firm has given any false information or facts or has suppressed facts or manipulated the documents etc, the earnest money deposit or the performance security as the case may be, will be forfeited without any further communication in this regard.

14. **बोली जमा करने के लिए प्रणाली और विधि MANNER AND METHOD FOR SUBMISSION OF BID :**

- a. The bidder is advised to paginate complete bidding documents excluding the CDFD Tender Documents in blue/black pen.
- b. The bidder is advised to attach the bid documents as under
 - i. Bid Covering Letter
 - ii. Detailed quotation of the bidder with Terms & Conditions without Price Bid details
 - iii. EMD
 - iv. Firm or VAT or TOT Registration Certificate
 - v. GST
 - vi. Two copies of Purchase Orders / Installation Reports as per eligibility
 - vii. List of Orders Executed
 - viii. Other documents as indicated above
 - ix. CDFD Tender Document duly signed and affixing company seal
 - x. Undertaking for reasonable Price.
 - xi. Copy of Price Bid without Prices
 - xii. Check List

Please don't enclose the balance sheet copies, Audited Reports, IT Rtns etc. and only submit the one page Financial Status duly filled in with Turnover details.

The Page No and enclosures details should be indicated in the Checklist without fail.

15. **बोली फार्म BID FORM :** The bidder shall use the format as per Annexure-A.

बोलीदाता का हस्ताक्षर
Sign. of Bidder

TECHNICAL BID (PART - I)

16. **बोली कीमतें BID PRICES:** The Bidder shall indicate the unit prices, discounts and total bid prices of the goods it proposes to supply.
- Prices indicated shall be entered separately in the following manner (For indigenous Items): The Price of the goods, quoted (ex-works, ex-factory, ex-showroom, ex-warehouse, or off-the shelf, as applicable), including all duties and sales and other taxes already paid or payable.
- करों / कर्तव्य TAXES / DUTIES:** We are exempted from payment of Excise Duty vide Notification Number 10/97 dated 01.03.1997 and Customs Duty under notification No.51/96 dated 23.07.1996. Hence Excise duty and Customs Duty, if any, should be shown separately. Please mention the applicable taxes (VAT/CST/Service) clearly. Form 'C' or 'D' cannot be issued by the Purchaser. However, being R&D Institute on Concessional Customs Duty Forms can be issued. No other charges except those mentioned clearly in the quotation will be paid.
- Rates should be quoted 'FOR' CDFD, Hyderabad inclusive of packing, forwarding, Customs clearance, installation and commission charges etc. If ex-works prices are quoted then packing, forwarding, documentation, freight and insurance charges must be clearly mentioned separately. Vague terms like "packing, forwarding, transportation, taxes etc. extra" without mentioning the specific amount/percentage of these charges will NOT be accepted.
- Prices quoted by the bidder shall remain fixed during the entire period of contract and shall not be subject to variation on any account. A bid submitted with an adjustable price quotation will be treated as non-responsive and may be liable for rejection.
- Instrument quoted should be complete in all respects; any additional accessories required for instrument to operate should also be quoted as part of the instrument and should be supplied along with instrument.
- Bidders are requested to quote the revised rates of GST as applicable to the Public Funded Research Institutions under the Notification No. 47/2017 Integrated Tax (Rate) and Notification No. 45/2017 Central Tax (Rate) dt. 14.11.2017 issued by Department of Revenue, Ministry of Finance, Government of India.**
- NO BIDDER SHOULD QUOTE THE PRICES HIGHER THAN THE MAXIMUM RETAIL PRICES (MRP) INCLUDING ALL CHARGES UP TO CDFD STORES.**
17. **बोली प्रक्रियाएं BID CURRENCIES:** Prices shall be quoted in Indian Rupees or in freely convertible foreign currency preferably in USD (\$), Euro (€), Yen (¥), GBP (£), Singapore Dollar (S\$), Australian Dollar (AUD\$), Canadian Dollar (CAD\$) wherever possible for correct evaluation during comparison.
18. **बोली सुरक्षा / अर्नेस्ट पैसा जमा (ई एम डी) BID SECURITY / EARNEST MONEY DEPOSIT (EMD):** The Bidder shall furnish, as part of its bid, a bid security (BS)/ Earnest Money Deposit (EMD) for an amount of Rs. 1,10,000/- (Rupees One lakh Ten Thousand only) as specified in the Invitation for Bids. The BS shall be submitted either by the principal or by the Indian agent and in the case of indigenous bidders, the BS shall be submitted by the manufacturer or their authorized dealer. The Bid Security is required to protect the Purchaser against the risk of Bidder's conduct, which would warrant the security's forfeiture. The Bid Security shall be in Indian Rupees for offers received for supply within India or freely convertible currency in the case of offers received for supplies from foreign countries. The bid security shall be in one of the following forms at the bidders' option:
- A bank guarantee issued by a Nationalized/Scheduled bank/Foreign Bank as per the format provided at Annexure-C in the bidding documents and valid for 6 months; or
 - A Banker's cheque or demand draft in favour of Director, CDFD, payable at Hyderabad.
- The Bid Security should be submitted in its original format. Copies shall not be accepted.
- The Bid Security of unsuccessful bidder will be discharged /returned as promptly as possible as but not later than 15 days after the expiration of the period of bid validity or placement of order whichever is later.
- The successful Bidder's Bid Security will be discharged upon the Bidder furnishing the performance security.
19. The firms registered with DGS&D, NSIC and Micro and Small Enterprises (MSE) if any, are exempted from payment of BS provided such registration includes the item they are offering and submit the valid registration copy with the quotation.
20. **The firms registered with MSME/MSEs should indicate the Udyog Aadhar Memorandum (UAM) Identification Number in their quotation failing which the exemption of EMD and other benefits as available will not be applicable.**
21. **बोली सुरक्षा जब्त की जा सकती है The bid security may be forfeited :**
- If a Bidder withdraws or amends or impairs or derogates its bid during the period of bid validity specified by the Bidder; or
 - In case of a successful Bidder, if the Bidder fails to furnish order acceptance within 7 days of the order and/or fails to furnish Performance Security within 7 days from the date of contract / order.
22. **बोलियों की वैधता का अवधि PERIOD OF VALIDITY OF BIDS:** Bids shall remain valid for 90 days after the date of bid opening prescribed by the Purchaser. In exceptional circumstances, the Purchaser may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing. The bid security provided shall also be suitably extended. A Bidder may refuse the request without forfeiting its Bid Security. A Bidder granting the request will not be required nor permitted to modify its bid. Bid evaluation will be based on the bid prices without taking into consideration the above corrections.

बोलीदाता का हस्ताक्षर
Sign. of Bidder

TECHNICAL BID (PART - I)

23. Bidders intend to send their bids through courier / postal services should ensure to send the quote well in advance as CDFD never takes any responsibility for the delay in receipt of the bids.
24. The Bidder is required to go through all the Terms & Conditions of the Tender document and sign all the pages as token of acceptance of having read the Terms and Conditions and accepted the same.
25. **बोलियों के प्रस्तुत करने के लिए अंतिम तिथि DEADLINE FOR SUBMISSION OF BIDS:** Bids must be received by the Purchaser at the address mentioned above not later than the time and date specified therein. In the event of the specified date for the submission of Bids being declared a holiday for the Purchaser, the Bids will be received up to the appointed time on the next working day. The Purchaser may, at its discretion, extend the deadline for submission of bids by amending the bid documents in accordance with Clause relating to Amendment of Bidding Documents in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline will thereafter be subject to the deadline as extended.
26. **देर से की गई बोली LATE BIDS:** Any bid received by the Purchaser after the deadline for submission of bids prescribed by the Purchaser will be rejected. Such tenders shall be marked as late and not considered for further evaluation. It will be returned to the bidders in their original envelope without opening.
27. **बोलियों में बदलाव, प्रतिस्थापन एवं वापसी WITHDRAWAL, SUBSTITUTION AND MODIFICATION OF BIDS:** A Bidder may withdraw, substitute, or modify its Bid after it has been submitted by sending a written notice and is received by the Purchaser prior to the deadline for submission of bids. No Bid may be withdrawn in the interval between deadline for submission tender document. Withdrawal bids will be returned to the bidder without opening of the same during the opening of bids. However, no withdrawals of Bids are permitted after the Deadline for submission.
28. **गोपनीयता CONFIDENTIALITY:** Information relating to the examination, evaluation, comparison and recommendation of contract award, shall not be disclosed to bidders or any other persons not officially concerned with such process until placement of the Order.
29. **बोलियों की घोषणा CLARIFICATION OF BIDS:** To assist in the examination, evaluation, comparison and post qualification of the bids, the Purchaser may, at its discretion, ask the Bidder for a clarification of its bid. The request for clarification and the response shall be in writing and no change in prices or substance of the bid shall be sought, offered or permitted. Any clarification submitted by a bidder in respect to its bid which is not in response to a request by the purchaser shall not be considered.
30. **प्रारंभिक परीक्षा PRELIMINARY EXAMINATION:** The Purchaser shall examine the bids to confirm that all documents and technical documentation requested in have been provided, required sureties have been furnished, and to determine the completeness of each document submitted. The Purchaser will examine the bids to determine whether they are complete, whether the documents have been properly signed, and whether the bids are generally in order.
31. If the Bidders have put in Specific conditions not enclosed, all the documents / data requested in the tender and not submitted the Tender in the manner as indicated may be liable for rejection, without seeking further clarifications.
32. **मूल्यांकन और बोली की तुलना EVALUATION & COMPARISON OF BIDS:** Bidders who have quoted as per the tender specifications will only be considered for comparison and other bids will be summarily rejected. The evaluation & comparison shall be made as under:
The final landing cost of purchase after all discounts, freight, forwarding, insurance warehouse to warehouse, custom clearing charges, Bank Charges and all duties, taxes etc. shall be the basis of evaluation.
- आयातित बनाम स्वदेशी प्रस्ताव Imported Vs. Indigenous Offers:** The final landing cost (ware house to ware house) of purchase taking into account, freight, forwarding, insurance, taxes etc. CIF/CIP with customs clearance charges, Bank/LC charges, transportation up to CDFD, Hyderabad shall be the basis of evaluation.
- Conditional tenders/discounts etc. shall not be accepted. Rates quoted without attached conditions (viz. Discounts having linkages to quantity, payment terms etc.) will only be considered for evaluation purpose. Thus conditional discounted rates linked to quantities and prompt/advance payment etc. will be ignored for determining inter-se position. The Purchaser however reserves the right to use the discounted rate/rates considered workable and appropriate for counter offer to the successful tenderers.
- Arithmetical errors in the financial bids will be rectified on the following basis:
- If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected.
 - If the supplier does not accept the correction of errors, its bid will be rejected.
 - If there is a discrepancy between the price quoted in words and figures, the **rate quoted in words will be taken as final** and shall be binding on the Bidder.
33. Bidders who have not agreed to CDFD payment terms, Delivery Schedules and not enclosed the relevant documents as per this tender Term will be treated as Unresponsive Bidders and may be rejected.

बोलीदाता का हस्ताक्षर
Sign. of Bidder

TECHNICAL BID (PART - I)

34. **सी डी एफ डी द्वारा वर्गीकरण CLARIFICATIONS BY CDFD:** The Tender Evaluation Committee may seek clarifications on the technical as well as commercial terms if deemed fit and the bidder to provide such clarifications in a reasonable time immediately within a day or two.
35. **उद्धृत आइटम का प्रदर्शन DEMONSTRATION OF QUOTED ITEM:** The Tender Evaluation Committee may evaluate your tender based on the documents submitted. However, in case of any technical clarifications, the Committee may request the bidder to make a detailed presentation of the quoted model including product demonstration at Hyderabad. The bidder is advised to arrange such presentation/ demonstration at their cost at CDFD.
36. **एकल मुद्रा में कनवर्टन CONVERSION TO SINGLE CURRENCY :** To facilitate evaluation and comparison, the Purchaser will convert all bid prices expressed in the amounts in various currencies in which the bid prices are payable to Indian Rupees at the selling exchange rate established by any bank in India as notified in the Newspaper / Bank Website on the date of Price Bid opening.
37. **समझौता वार्ता NEGOTIATIONS:** There shall not be any negotiation normally. Negotiations, if at all, shall be an exception and only in the case of items with limited source of supply. Negotiations shall be held with the lowest evaluated responsive bidder. Counter offers tantamount to negotiations and shall be treated at par with negotiations .
38. **पुरस्कार का मापदंड AWARD CRITERIA:** The Purchaser will place the order on the overall lowest evaluated Bidder and not on Itemwise. In exceptional cases, the Director, CDFD reserve the right to award the order on any other Bidder based on the recommendations of Expert Committee Constituted for the Evaluation of this Tender.
39. Due to the procurement process, the Purchaser may finalize the contract at the end of the bid validity period and the details will be uploaded on the website. Therefore, the bidders may visit Institute website for award details after the bid validity period.
40. **किसी भी बोली को स्वीकार करने और किसी भी या सभी बोलियों को अस्वीकार करने के लिए क्रेता का अधिकार PURCHASER'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS :** The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders.
41. **निष्पादन सुरक्षा PERFORMANCE SECURITY:** Within 7 days of receipt of the Purchase Order, the Supplier shall furnish Performance Security for 10% of the Order value in the form of Demand Draft / Bank Guarantee to be valid for 60 days after the warrantee / extended warrantee period. The proceeds of the performance security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.
- The Performance Security shall be denominated in Indian Rupees for the offers received for supplies within India and denominated in the currency of the contract in the case of offers received for supply from foreign countries. In the case of imports, the PS may be submitted either by the principal or by the Indian agent and, in the case of purchases from indigenous sources, the PS may be submitted by either the manufacturer or their dealer/bidder.
- The Letter of Credit will be opened after receipt of 10% of the Performance Guarantee valid for 60 days beyond the Warrantee period.
- The Performance security shall be in one of the following forms:
- I) A Bank guarantee issued by a Nationalized/Scheduled bank located in India or a bank located abroad.
 - II) The Performance security may also be in the form of Banker's cheque or Account payee demand draft in favour of Director, CDFD, Hyderabad
- The performance security will be discharged by the Purchaser and returned to the Supplier not later than 60 days following the date of completion of the Supplier's performance obligations, including any warranty obligations.
42. **पुरस्कार के समय खरीदार के अधिकारों के लिए खरीदार का अधिकार PURCHASER'S RIGHT TO VARY QUANTITIES AT THE TIME OF AWARD:** The Purchaser reserves the right at the time of award of Contract to increase or decrease the quantity of goods and services originally specified in the Tender documents without any change in unit price or other terms and conditions.
43. **असीमित पोस्ट बोली संशोधित करें UNSOLICITED POST BID MODIFICATION:** No suo-moto reduction in prices quoted by bidder shall be permitted after tender submission due date & time / extended due date & time. If any bidder unilaterally reduces the prices quoted by him in his bid after opening of bids, the bid(s) of such bidder(s) will be liable to be rejected. Such reduction shall not be considered for comparison of prices but shall be binding on the bidder in case he happens to be a successful bidder for placement of Order.
44. **ऑर्डर स्वीकृति ORDER ACCEPTANCE:** The successful bidder should submit acceptance of the Purchase Order immediately but not later than 7 days in any case from the date of issue of the Purchase Order failing which it shall be presumed that the supplier is not interested and his bid security is liable to be forfeited.

बोलीदाता का हस्ताक्षर
Sign. of Bidder

TECHNICAL BID (PART - I)

45. **संयुक्त उद्यम, कंसोर्टियम या एसोसिएशन JOINT VENTURE, CONSORTIUM OR ASSOCIATION:** If the Supplier is a joint venture, consortium, or association, all of the parties shall be jointly and severally liable to the Purchaser for the fulfillment of the provisions of the Contract and shall designate one party to act as a leader with authority to bind the joint venture, consortium, or association. The composition or the constitution of the joint venture, consortium, or association shall not be altered without the prior consent of the Purchaser.
46. **मानक STANDARDS:** The Goods supplied and services rendered under this Contract shall conform to the standards mentioned in the Technical Specifications, and, when no applicable standard is mentioned, to the authoritative standard appropriate to the Goods' country of origin and such standards shall be the latest issued by the concerned institution.
47. **टेंडर की अक्षमता DISQUALIFICATION OF TENDERS:**
- Tenders are liable for rejection if they are not in line with the terms and conditions of this tender notice.
 - Conditional quotations will be liable for rejection or may not be considered.
 - Fax or e-mail tender documents /bids will be rejected.
 - Submission of Single Bid as against Two Bid System or Quotes submitted in Email/fax will be rejected.
48. **धोखा और भ्रष्टाचार FRAUD AND CORRUPTION:** The purchaser requires that the *bidder's* suppliers and contractors observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy, the following are defined:
 "Corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution; "Fraudulent practice" means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract; "Collusive practice" means a scheme or arrangement between two or more bidders, with or without the knowledge of the purchaser, designed to establish bid prices at artificial, noncompetitive levels; and "Coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract.
 The purchaser will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question.

अध्याय CHAPTER 2

विस्तृत नियम और शर्तें DETAILED TERMS AND CONDITIONS

1. **परिभाषाएं DEFINITIONS :** In this Contract, the following terms shall be interpreted as indicated: The following words and expressions shall have the meanings hereby assigned to them:
- a. "Contract Price" means the price payable to the Supplier as specified in the Purchase Order, subject to such additions and Adjustments thereto or deductions there from, as may be made pursuant to the Contract.
 - b. "Day" means calendar day.
 - c. "Completion" means the fulfillment of the Related Services by the Supplier in accordance with the terms and conditions set forth in the Purchase Order.
 - d. "Goods" means all of the commodities, raw material, machinery and equipment, and/or other materials that the Supplier is required to supply to the Purchaser as per the Purchase Order.
 - e. "Related Services" means the services incidental to the supply of the goods, such as transportation, insurance, installation, commissioning, training and initial maintenance and other such obligations of the Supplier as per the Purchase Order.
 - f. "Supplier" means the natural person, private or government entity, or a combination of the above, whose bid to perform the Contract has been accepted by the Purchaser and is named as such in the Purchase Order.
 - g. The final destination," where applicable, means the place of delivery as indicated in the Purchase Order.
2. **सप्लायर का उत्तरदायित्व SUPPLIER'S RESPONSIBILITIES:** The Supplier shall supply all the Goods and Related Services included in the Scope of Supply and the Delivery and Completion Schedule, as per Purchase Order Terms.
3. The Supplier shall take full responsibility of prompt service and support to ensure the instrument is replaced during the warranty period within a reasonable time.
4. **उप-अनुबंधों SUB-CONTRACTS:** The Supplier shall notify the Purchaser in writing of all subcontracts awarded under this Contract if not already specified in the bid. Such notification, in his original bid or later, shall not relieve the Supplier from any liability or obligation under the Contract. Sub-contract shall be only for bought-out items and sub-assemblies.

बोलीदाता का हस्ताक्षर
Sign. of Bidder

TECHNICAL BID (PART - I)

5. **अनुबंध की कीमत CONTRACT PRICE:** Prices charged by the Supplier for the Goods supplied and the Related Services performed under the Purchase Order shall not vary from the prices quoted by the Supplier in its bid.
6. **कॉपीराइट COPY RIGHT:** The copyright in all drawings, documents, and other materials containing data and information furnished to the Purchaser by the Supplier herein shall remain vested in the Supplier, or, if they are furnished to the Purchaser directly or through the Supplier by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party.
7. **पेटेंट अधिकार PATENT RIGHTS:** The Supplier shall indemnify the Purchaser against all third-party claims of infringement of patent, trademark or industrial design rights, copy rights arising from use of the Goods or any part thereof in India.
8. **निरीक्षण और परीक्षण INSPECTIONS AND TESTING:** The Supplier shall at its own expense and at no cost to the Purchaser carry out all such tests and/or inspections of the Goods and Related Services. or as discussed during the course of finalizing the contract. The Purchaser or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to the Purchaser. The Purchaser shall notify the Supplier in writing in a timely manner of the identity of any representatives retained for these purposes. The inspections and tests may be conducted on the premises of the Supplier or its subcontractor(s), at the point of delivery and/or at the Goods final destination. If conducted on the premises of the Supplier or its subcontractor(s), all reasonable facilities and assistance, including access to drawings and production data -shall be furnished to the inspectors at no charge to the Purchaser.
9. **पैकिंग PACKING:** The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit. In order to maintain safety of the equipment, we prefer to have wooden crating with adequate cushion inside for transportation of any goods. The Material to be dispatched with International standard packing to withstand Rigors, and to avoid any transit damages.
10. **पैकिंग निर्देश PACKING INSTRUCTIONS:** Each package will be marked on three sides with proper paint/indelible ink, the following:
 - i. Purchaser Name & Address
 - ii. Item Nomenclature
 - iii. Order/Contract No.
 - iv. Country of Origin of Goods
 - v. Packing list reference number
11. **वितरण और दस्तावेज DELIVERY AND DOCUMENTS:** Delivery of the Goods and completion and related services shall be made by the Supplier in accordance with the terms specified by the Purchaser in the Purchase Order.
12. The supplier shall fax or email the details of the shipment to the purchaser with a copy to the Clearing Agent. The following scanned documents are to be emailed at: spo@cdfd.org.in and purchase@cdfd.org.in as well as faxed on fax No. 091-40- 27209490 and confirm its receipt by the purchaser.
 - i. Airway Bill / Bill of Lading;
 - ii. Invoice
 - iii. Packing list

The above documents should be received by the Purchaser before arrival of the Goods (except where the Goods have been delivered directly to the Consignee with all documents) and, if not received, the Supplier will be responsible for any consequent expenses.
13. **Please note that as per the revised guidelines issued by Customs Notification No.26/2017, the free time allowed is 48 hours and penalty will be imposed for late clearance.**
14. **If there is a delay in forwarding the Airway Bill, Invoice, packing list and Cargo Arival Notice (CAN) before 72 hours prior to arrival of the cargo, the penalty charged by the Customs Department will be recovered from your bill and the balance will be payable.**

Please inform your freight forwarder to issue the Delivery Order and complete all the formalities with Customs and handover the Delivery Order with a day to avoid penalty.
15. Please make appropriate commitments in writing that the instrument model being offered is current and is not likely to be obsolete within the next couple of years and that spare parts will be available for it for at least seven years after the installation. The Installation of the equipment is deemed complete only after all the sub-units of the main equipment such as the computers/printers/UPS/Software etc., is installed and tested as per the specifications in the offer/ broucher / purchase order and demonstrated to the satisfaction of the end user.

बोलीदाता का हस्ताक्षर
Sign. of Bidder

TECHNICAL BID (PART - I)

16. **बीमा INSURANCE:** The Goods supplied under the Contract shall be fully insured in Indian Rupees against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery.
- For delivery of goods at the purchaser's premises, the insurance shall be obtained by the Supplier in an amount equal to 110% of the value of the goods from "**Warehouse to warehouse**" (final destinations) on "All Risks" basis including war Risks and Strikes.
17. **परिवहन TRANSPORTATION:** Where the Supplier is required under the Contract to deliver the Goods on FOB, transport of the Goods, up to and including the point of putting the Goods on board the vessel at the specified port of loading, shall be arranged and paid for by the Supplier.. Where the Supplier is required under the Contract to deliver the Goods FCA, transport of the Goods and delivery into the custody of the carrier at the place named by the Purchaser or other agreed point shall be arranged and paid for by the Supplier, and the cost thereof may be included in the Price Schedules.
- Where the Supplier is required under the Contract to deliver the Goods CIF or CIP, transport of the Goods to the port of destination or such other named place of destination in the Purchaser's country, as shall be specified in the Contract, shall be arranged and paid for by the Supplier, and the cost thereof may be included in the Price Schedules.
- In the case of supplies from within India, where the Supplier is required under the Contract to transport the Goods to a specified destination in India, defined as the Final Destination, transport to such destination, including insurance and storage, shall be arranged by the Supplier, and the related costs may be included in the Contract Price.
- The supplier should provide the required labour to unload the materials at CDFD stores as CDFD cannot arrange any facilities or labour in this regard.
18. **आकस्मिक सेवाएं INCIDENTAL SERVICES:** The supplier may be required to provide any or all of the services, as discussed during the course of finalizing the contract. User and detailed Service Manual to be supplied along with the equipment.
- a) **स्पेयर पार्ट्स SPARE PARTS:** The Supplier shall be required to provide the spare part details/materials, notifications, and information pertaining to its manufacture or distribution: Such spare parts as the Purchaser may elect to purchase from the Supplier, providing that this election shall not relieve the Supplier of any warranty obligations under the Contract; and
 - b) In the event of termination of production of the spare parts:
 - i) Advance notification to the Purchaser of the pending termination, in sufficient time to permit the Purchaser to procure needed Requirements if any; and
 - ii) Following such termination, furnishing at no cost to the Purchaser, the blueprints, drawings and specifications of the spare parts, if requested.
19. **वारंटी WARRANTY:** The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract. The Warrantee should be comprehensive and on site for 3 years.
- The Supplier further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in India.
 - The warranty shall remain valid for Thirty Six (36) months from the date of installation of the equipment. **The warrantee Certificate should be handed over to CDFD after the installation is completed.**
 - The Purchaser shall give notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects.
 - Upon receipt of such notice, the Supplier shall, within a reasonable period of time expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser.
 - **During the period of warranty any component or spare part is to be brought from abroad, all associated costs shall be borne by the supplier including the customs duty charges.**
 - The defective material / goods originally imported will not be handed over to the supplier and the same will be re-exported to the place of manufacturer at the cost of the supplier. In case, the manufacturer has the office in India the same may be handed over to them with an undertaking that they will re-export to their manufacturing facility within a reasonable time and submit the proof to that extent.
 - If having been notified, the Supplier fails to remedy the defect within a reasonable period of time; the Purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.
 - **If the defective material / goods originally supplied indigenously, the same will be handed over to the supplier after replacement of the material under warrantee period and not before the replacement.**

बोलीदाता का हस्ताक्षर
Sign. of Bidder

TECHNICAL BID (PART - I)

20. **भुगतान की शर्तें TERMS OF PAYMENT:** Our rules do not permit any advance payment either direct or through a bank. However, payment of your bill will be made within 30 days after receipt of the materials in good condition by way of Foreign Demand Draft (FDD) or Wire Transfer or on Sight Draft basis. Alternatively, 100% Order value will be opened by way of Confirmed Irrevocable Letter of Credit. **90% of the L/C value will be released against receipt of complete shipping documents and the balance 10% value will be released after successful installation acceptable to CDFD within 3 months.**
- The foreign supplier should accept CDFD standard Letter of Credit terms which will be forwarded for confirmation before establishing the LC.**
21. **वितरण कार्यक्रम Delivery Schedule:** Within 2 months from the date of receipt of order. However, kindly indicate the delivery schedule in the quotation.
22. **All banking charges outside India will be borne by the supplier and inside India charges will be borne by the purchaser.**
23. **संशोधन AMENDMENTS:** The Purchaser may at any time, by written order given to the Supplier make changes within the general scope of the Contract as mutually agreed terms.
24. **सौंपा गया काम ASSIGNMENT:** The Supplier shall not assign, in whole or in part, its obligations to perform under the Contract, except with the Purchaser's prior written consent.
25. **समय का विस्तार EXTENSION OF TIME :** Delivery of the Goods and performance of the Services shall be made by the Supplier in accordance with the time schedule specified in the contract. If at any time during performance of the Contract, the Supplier or its sub-contractor(s) should encounter conditions impeding timely delivery of the Goods and performance of Services, the Supplier shall promptly notify the Purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Supplier's notice, the Purchaser shall evaluate the situation and may, at its discretion, extend the Supplier's time for performance with or without penalty, in which case the extension shall be ratified by the parties by amendment of the Contract.
- Except as provided under the Force Majeure clause, a delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable to the imposition of penalty pursuant to Penalty Clause unless an extension of time is agreed upon pursuant to above clause without the application of penalty clause.
26. **जुर्माना खंड PENALTY CLAUSE:** Subject to clause on Force Majeure, if the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Purchase order, the Purchaser shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as penalty, a sum equivalent to 0.5 percent of the order value for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of 10 Percent. Once the maximum is reached, the Purchaser may consider termination of the Contract for Default.
27. **डिफॉल्ट के लिए समाप्ति TERMINATION FOR DEFAULT:** The Purchaser may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the Supplier, terminate the Contract in whole or part
- If the Supplier fails to deliver any or all of the Goods within the period(s) specified in the contract, or within any extension thereof granted by the Purchaser
 - If the Supplier fails to perform any other obligation(s) under the Contract.
 - If the Supplier, in the judgment of the Purchaser has engaged in corrupt or fraudulent or collusive or coercive practices.
- In the event the purchaser terminates the contract in whole or in part, he may take recourse to any one or more of the following action:
- The Performance Security is to be forfeited;
 - The purchaser may procure, upon such terms and in such manner as it deems appropriate, stores similar to those undelivered, and the supplier shall be liable for all available actions against it in terms of the contract.
28. **अनिवार्यता के लिए समाप्ति TERMINATION FOR INSOLVENCY:** The Purchaser may at any time terminate the Contract by giving written notice to the Supplier, if the Supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy, which has accrued or will accrue thereafter to the Purchaser.
29. **विवादों का निपटारा SETTLEMENT OF DISPUTES:** The Purchaser and the supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.
30. **लागू कानून APPLICABLE LAW:** The Contract shall be interpreted in accordance with the laws of the Union of India and all disputes shall be subject to place of jurisdiction.
31. **नोटिस NOTICES:** Any notice given by one party to the other pursuant to this contract/order shall be sent to the other party in writing and confirmed to the other party's address specified in the Purchase Order.

बोलीदाता का हस्ताक्षर
Sign. of Bidder

TECHNICAL BID (PART - I)

32. **साइट तैयारी और स्थापना SITE PREPARATION AND INSTALLATION:** The Purchaser is solely responsible for the construction of the equipment sites in compliance with the technical and environmental specifications. The Purchaser will designate the installation sites before the scheduled installation date to allow the Supplier to perform a site inspection to verify the appropriateness of the sites before the installation of the Equipment, if required. The supplier shall inform the purchaser about the site preparation, if applicable, needed for installation, of the goods at the purchaser's site immediately after placement of Purchase Order.
33. **कर और शुल्क TAXES AND DUTIES:** Suppliers shall be entirely responsible for all taxes, duties, license fees, octroi, road permits, etc., incurred until delivery of the ordered Goods to the Purchaser at the final destination.
34. Commercial Invoice produced by Reprographic system or automated computerized system marked as original not acceptable.
35. Please re-check the prices, terms and conditions and other important terms of your offer before submission as you are bound to accept the same in case your offer is evaluated as Lowest Bid.
36. CDFD will not entertain any typographical errors / mistakes made by the bidder in their quote as the evaluation of the bids is done based on the bid submitted as on the due date and no change of prices or any terms and conditions will be considered under any circumstances.

धोषणा DECLARATION

I/We _____ have read the entire terms and conditions of this Tender document and are agreeable to the terms and conditions mentioned herein.

Sign. of Bidder

Name:

Company Seal:

Mobile No.:

TECHNICAL BID (PART - I)**अध्याय CHAPTER 3****SPECIFICATIONS FOR DATA CENTER SERVER RACKS INTEGRATED WITH RACK BASED POWER DISTRIBUTION SYSTEM, CLOSED LOOP COOLING USING LIQUID COOLING PACKAGE, FIRE SAFETY AND MONITORING SYSTEMS****विशेष विवरण Specifications:****Annexure - A****1.1 Technical Pre-Qualification for the Bidders**

Mandatory requirements for a bidder to qualify as a participant in this tender:

S.No	Technical Pre-Qualification Criteria	Compliance Yes/No	Remarks
1.	The Bidder should be in the similar business for the last 5 years and have successfully supplied and executed at least One similar equipment to any of the Department of State / Central / PSU/ University / R & D Institutes / Pharmaceutical Laboratories / Public limited Companies during the last 5 years. Similar Equipment means Data Center Server Racks Integrated with Rack based Power Distribution system, closed Loop Cooling using Liquid cooling Package, Fire Safety and Monitoring Systems and UPS System under Lab Renovation. Proof to be enclosed with the quote.		
2.	The bidding OEM/bidder should have successfully executed at least one work of Rs. 44,00,000/- capacity and two works of Rs. 33,00,000/- and three works of Rs. 22,00,000/- during any one of the preceding lave five financial years using the architecture and technologies similar to those being proposed in their proposal against this tender with same OEM or different OEMs.		
3.	The OEM/partner should have the experience in building Data Centers in Indian Data center Market atleast 3 years with logistics facility for easy access and availability of spares in India to ensure the proper back-end support for smooth execution and post-sale support operations. Documentary proofs should be attached.		
4.	All warranty and support must be serviced directly by the OEM. CDFD requires that there be a Single Point Of Contact (SPOC) from OEM/Vendor who is responsible for all issues between CDFD and the OEM.		
5.	Bidder should be either an Original Equipment Manufacturer (OEM) or should be authorized System		

	Integrator Partner having back to back Support Agreement with the OEM. Manufacturer's Authorization Form (MAF) for participating in this tender is mandatory for bidders and should be attached along with technical bid		
6.	OEM should have a local service center in Hyderabad. Documentary proofs should be enclosed.		
7.	The OEM must have an India based support infrastructure by maintaining a local spares depot in the country. This is to ensure immediate delivery of spare parts from OEM to its channel partner/system integrator.		
8.	The complete proposed solution must have all encompassing comprehensive onsite warranty of 3 years for all UPS and associated components is mandatory.		
9.	Products offered should have official OEM support for next three years from the date of acceptance of installation.		
10.	All quotations submitted must follow the prescribed format for technical compliance as in document below. Failure to do will result in the quotation being summarily rejected		
11.	One bidder can propose only one technical solution and the price bid for the same should be submitted. Quoting of multiple technical solutions with multiple price bids will result in the quotation being summarily rejected.		

बोलीदाता का हस्ताक्षर
Sign. of Bidder

TECHNICAL BID (PART - I)**Annexure — B****Scope of Work**

The scope of work includes the following,

The successful bidder should supply, install and commission the server racks, Fire containment, and PDUs along with Closed Loop Cooling using Liquid Cooling Package (LCP) in the first floor Data Center of CDFD Hyderabad.

Specifications of the site:

1. **Allocated physical space:** Wing 1A
2. **Location of the building:** First floor
3. **Existing Data Center Setup:** In the same wing
4. **HVAC:** Closed loop cooling to optimize airflow management and space utilization in the Data Center. The cooling solution proposed must be chilled water based. CDFD has its own chilled water plant on campus. Chilled water will be provided at about 7.5 to 9 degrees from campus the chilled water facility. The bidder has to tap the nearby chilled water circulation lines for providing the chilled water connections for the inlet and the outlet of the LCP.
5. **Server Rack — 3or more Nos (for 115U or more usable U space)**

These racks will be used to mount and house all HPC infrastructure, server, network and storage devices in the data center. The rack has to be designed to meet all safety requirements of a modern data center. Both front and rear doors should have a handle with locking options. The rack should be suitable for baying to a high performance cooling rack. Cable entry provision should be via the roof plate and gland plate without affecting climatic conditions inside the rack. There will not be any false flooring provided for hosting these racks. So, bidders have raise the racks and cooling units above the ground level using server rack plinths and chilled water inlet and outlet piping to the racks has to be carried out on the floor with piping supports.

Specifications of the Server Rack:

Basic Structure: Frame of sturdy frame section construction. All profile edges are radiused. Removable top & Bottom cover with Cable entry provision. Frames should be bayable, scalable and modular.

- 42U Server Rack with 42U usable space with the 800 W x 2000 H x 1500 or more D dimensions.
- Fitted with Front Glass door, & Rear Sheet Steel Door with locking system and handle
- Rack Design should support closed loop High performance cooling
- The door should be inter-changeable at site, at any point of time

बोलीदाता का हस्ताक्षर
Sign. of Bidder

TECHNICAL BID (PART - I)

- Side panel should be with PU gasket with screw fixing to avoid air leakage
- Side panel required only at the end of the row, on each side
- 19" angles front and back.
- Top cover with sliding cable entry
- Bottom cover with sliding cable entry
- Leveling feet
- Stationery shelf 1 No. per racks.
- Cable manager with PVC cable loops
- Horizontal Earthing Busbar per cabinet.
- Hardware pack of 20 (5 packs per rack)
- All Racks should be certified according to ISO 9001, 14001, 18001. Complying EIA 310, DIN 41494 and IEC 297 standards
- Load bearing capacity: 1400KG at Frame & 1000 Kgs on 19" mounting angles.
- Surface Finish: Nano Ceramic Coated, electro-dipcoat primed to 20 microns and powder coated with textured polyester RAL 7035 to 80 to 120 microns.
- Rack should be capable of accommodating minimum of 2 Three Phase PDU's at the rear (4 PDU's preferred)

6. Power Distribution Units (PDU) — 6 or more Nos (for 115U or more usable U space)

- 63A 3 Phase input with single phase output Vertical (Ammeter/phase) Metered PDUs with minimum 24 Nos IEC 320 socket C13 Ports and 6 Nos of IEC 320 Socket C19 ports.
- 6 Nos of Male-Female 63A 3 Phase Bottle Mobile sockets for connections.

7. Closed Loop Rack based built-in cooling — 2 Nos

The Data center should be equipped with Liquid Cooling package System; it is an air/water heat exchanger to remove high levels of waste heat from server enclosures and to provide uniform, effective, affordable cooling for Servers and similar IT equipment (switches etc.) installed in server enclosures. Each liquid cooling system should be a closed unit consisting of a cooling system and be able to cool minimum of one or two server enclosures.

- **High Performance Liquid Cooling Package — Closed Loop Cooling**
- The design of the unit should be optimized for use in data centers.
- The integrated air/water heat exchanger should guarantee a cooling output of up to 55 KW, combined with standard server enclosure dimensions, the lowest possible weight and comprehensive possibilities for monitoring.
- The air/water heat exchanger should be mounted on the side of the rack.
- LCP Rack CW should offer enclosure-based cooling separate from the room air and is thus also able to reduce the noise level.

TECHNICAL BID (PART - I)

- The unit should be capable of providing cooling for either one or two server racks.
- Hot air from the server/network equipment should be drawn off to the rear of the rack. After cooling, it should be expelled to the left and right in front of the 19" level over the whole enclosure height and is thus made available to the IT equipment once more.
- The use of an integrated EC fan module should achieve maximum efficiency and minimizes the electrical energy consumption.
- The flow characteristics of the heat exchanger should be optimized for minimum possible pressure loss on the air side. This in turn minimizes energy consumption of the fans.
- The high-performance heat exchanger should guarantee maximum cooling output even at high water inlet temperatures, enabling the proportion of operation in combination with indirect free cooling to be maximized and operating costs reduced accordingly.
- The air/water heat exchanger and server rack should be separated from each other. This eliminates the risk of water penetrating into the server rack and improves the ease of installation and service.
- Condensate and leakage management should be integrated.
- The water connection can be realized optionally to the top or bottom. Necessary accessories to be included in this proposal.
- An intelligent sensor network should monitor air and water temperatures, as well as the water flow rate and leakage management.
- There must be multiple temperature sensors for the hot and cold air provides for redundancy.
- Monitoring and alarm management for all physical parameters should be realized via SNMP and over an Ethernet connection from the CDFD LAN.
- Chosen layout should provide for fast and simple maintenance and service for all relevant components. Fans should be exchangeable at any time in a matter of seconds, also during operation (hot swapping).
- Temperature sensors in the water inlet/return should similarly be exchangeable without interrupting to operation.
- Optional: To enable the displaying of all physical parameters, an optical color touch screen should be integrated into the front of the unit.
- The system should be compatible with BMS and connectivity to CDFD network and BMS should be provided.

बोलीदाता का हस्ताक्षर
Sign. of Bidder

TECHNICAL BID (PART - I)

Installation and commissioning:

Installation and commissioning includes

- Installation and testing of server racks and LCP units along with PDUs
- Connecting and commissioning of chilled tapping to the LCPs and check for leakages
- Testing the LCP units for humidity and moisture control with 48 hours dry run test.
- Tapping of electrical connections with cabling from the breakers in main power panel and supply, install and commission a local distribution board according to power 3 Nos of 55KW LCP units and wiring to the two LCPs from the DBs to the respective LCP units and provisioning for third LCP for future expansion.

Note:

- All the accessories and items required to complete the supply, installation and commissioning of the quoted items should be included in the bill of materials and it should be quoted.
- Required Power calculations, Input power cable sizing, MCB and DB ratings for catering the full load of LCPs and PDUs should be furnished along with the quotation.

Annexure – B

2.1 Scope of Work

The scope of work includes the following,

The successful bidder should supply, install and commission the 80 KVA Modular UPS with N+1 redundancy along with battery bank and relocation of existing electrical setup in the first floor Data Center of CDFD Hyderabad for the expansion of existing data center.

Part -1: Supply, Installation and Commissioning of 80 KVA Modular UPS with battery banks and cooling for the same (Preferred Makes – APC/Delta/Emerson/Vertiv only)

- Minimum 80 KVA Usable capacity using minimum 20 KVA modules with N+1 redundancy with 0.99 PF
- Battery banks should be sized up and configured for 15 minutes back up at full load.
- Only SMF maintenance free batteries should be used (Makes – AmaraRaja/Exide/Rocket/Vertiv)
- It should be transformer-less genuine online, double conversion UPS with a static bypass.
- Each UPS module should have its own operator panel and its own CPU, But also a power module and its own static bypass.
- Decentralize Parallel Architecture with maximum availability
- System should have inherent intelligence of the modules these should be integrated during running operation. This means that the system can be extended at any time.

बोलीदाता का हस्ताक्षर
Sign. of Bidder

TECHNICAL BID (PART - I)

- The modular design also means that it can be adjusted easily to suit specific customer requirements.
- Please check Annexure – D for detailed specification of UPS and battery banks.
- Warranty and support – 3 Years onsite OEM warranty for UPS and two years warranty for the battery bank.

2.2 Installation and Commissioning:

The bidder/OEM must conduct exhaustive site study and provide exact requirements for providing UPS back up for the Compute load. CDFD will be responsible for providing the required power for the Data Center. All components necessary for complete setup of UPS works must be a part of the quotation. UPS input can be taken from power panel adjacent to the data center room. UPS output to 6 Nos of 63A three phases PDUs in three server racks should be connected with proper earthing. UPS should provide a minimum of 15 minutes backup at full capacity load. UPS configuration must be modular and provide redundancy. Required earthing should be considered for the UPS and server racks. Bidders are requested to do a site survey before furnishing the Bill of materials.

Specifications for Data Center Server Racks integrated with Rack Based Power Distribution System, Closed Loop Cooling using Liquid Cooling Package, Fire Safety and Monitoring Systems

1.0 Objective:

Design of the data center should with high "Energy efficiency", "sustainability"& with "Green IT" concept. The power consumption during running operations needs to be optimized. The data center must make the required services available with high performance, high availability with modular scalable Infrastructure for future expansion.

The data center design should meet the following industry standards for Tier III or above classifications:

- ASHRAE's cooling standards.
- IEEE standards for Electrical.
- TIA 942 for Data Centre.
- NFPA, UL and local fire codes for Safety and security.
- ISO standards for processes and procedures.

The Blue print of all the buildings will be prepared by the successful bidder after the contract has been awarded. Vendor will undertake all the necessary activities for successful implementation of the Data Center.

The Specification of Data Center is as follows: -

2.0 Racks: 3 or 4 Nos (for 115U usable space)

- Network Rack 800mm Width X 2000mm Height (42U) X 1500mm or more Depth : 3 or 4 Nos

बोलीदाता का हस्ताक्षर
Sign. of Bidder

TECHNICAL BID (PART - I)

These racks will be used to mount and house all server / network / storage devices in the data center.

The rack has to be designed to meet the safety requirements of the modern data centre. Both the front and rear door should have a handle with locking options. The rack should be suitable for baying to a high performance cooling rack. Cable entry should be entered via the roof plate and via the gland plate without affecting the climatic conditions inside the rack.

Technical Specifications:

Basic Structure: Frame Of sturdy frame section construction, consisting of multi folded (minimum 9 fold) x folded rolled hollow frame section punched in 25mm DIN pitch pattern. All profile edges are radiused. The corners are welded, with copper coated corner blocks. Removable top & Bottom cover with Cable entry provision. Frames should be bayable, scalable and modular.

High Performance Cooling Area Racks:

- Server/Network Rack 600/800mm Width X 2000mm Height (42U) X 1500mm or more Depth.
- Fitted with Front Glass door & Rear Sheet Steel Door with 4 point locking system and comfort handle with locking.
- Rack Design should support closed loop High performance cooling.
- The door should be inter-changeable at site, at any point of time.
- Side panel should be with PU gasket with screw fixing to avoid air leakage.
- Side panel required only at the end of the row, on each side.
- 19" angles front and back.
- Top cover with slideable cable entry.
- Bottom cover with slideable cable entry.
- Adjustable Leveling feet.
- Stationery shelf 1 No. per racks.
- Vertical cable managers with cable loops.
- Horizontal 1U Cable manager with PVC cable loops.
- Horizontal Earthing Busbar per cabinet, 20 point for earth connection.
- Captive Hardware pack.
- Baying kit.
- Blanking panels
- IP54 protection rating when installed (joined to neighboring cooling unit for closed loop).
- All Racks should be certified according to ISO 9001, 14001, 18001. Complying EIA 310, DIN 41494 and IEC 297 standards
- Load bearing capacity: 1500KG at Frame & 1000 KGs. On 19" mounting angles.
- Surface Finish: Nano Ceramic Coated, electro-dipcoat primed to 20 microns and powder coated with textured polyester RAL 7035 to 80 to 120 microns.

TECHNICAL BID (PART - I)**4.0 Closed loop cooling solution: (2) No's**

Construction of the device optimized for data centers.

The integrated air/water heat exchanger ensures a cooling output of up to 55 kW with standard server enclosure dimensions, the lowest possible weight and a comprehensive monitoring option.

The heat exchanger is mounted laterally on the rack.

The LCP Rack CW offers an enclosure-based and room air-independent cooling system that also reduces the noise level.

The device is able to cool all server racks.

Maximum efficiency is achieved and the consumption of electrical energy is minimized by using four built-in EC fan modules This provides investment security if the full cooling output does not need to be used at the beginning of the installation.

The device is ready to take a maximum of six EC fan modules. A full fan configuration is therefore possible for reasons of redundancy or to minimize electrical power consumption.

The air/water heat exchanger and server rack are arranged in rows though access is separate in each case. This prevents water penetrating into the server rack and makes installation and service easier.

Access to the adjacent IT rack via the LCP is not possible.

A leak detection feature is integrated. A sensor installed in the condensate tray detects leaks, the main controller then issues an alarm message and/or interrupts the supply of cooling medium into the device.

The device has been designed solely to provide a sensitive cooling output.

The water connection can be made optionally downwards or upwards by means of an accessory kit (1 1/2" external thread).

Short device commissioning time, thanks to simple and fast venting.

The fans can be replaced at any time, very quickly and without using tools.

A highly developed network-integration software concept for monitoring/setting all the technical parameters is integrated as default.

Should the controller fail, an integrated fail-safe operation mode ensures reliable cooling. Up to four additional sensors (temperature, humidity, etc.) can be connected.

Technical details:

- Sensitive cooling output with four/five/six fans: 48/51/53 kW
- Installed fans: 6
- Volumetric air flow: 8,000 m³/h (6 fans)
- Cooling output (six fans): 53 kW
- Max. air inlet temperature 25°C
- Inlet temperature: 15°C
- Medium: water

बोलीदाता का हस्ताक्षर
Sign. of Bidder

TECHNICAL BID (PART - I)

- Cooling medium throughput: approx.125 l/min
- Pressure loss: approx. 1 bar
- Water connection: 1 ½” external thread
- Voltage: 230 V, 1~, 50/60 Hz, 400 V, 3~, N, 50/60 Hz
- Max. connected electrical load: (three fan modules): 1050 W
- Server air inlet temperature control via flow rate control and EC fan fitted with linear speed controller
- Colour: RAL 7035
- Dimensions: W x H x D: 300 x 2000 x 1500 mm or more
Weight as delivered: approx. 260 kg

5.0 Safety & Monitoring System: 1 set

The goals of safety & monitoring system are to efficiently protect people, assets, data and the environment from the dangers and effects of fire, and to minimize material damages, loss of data, operational interruptions and the consequent loss of business.

The system should be equipped with Novec 1230 Clean Agent Fire Suppression System.

The system should monitors all IT racks for fire, temperature and humidity, enclosures. The unit should be the central unit of the monitoring system up to 32 sensors can be connected. The unit should have TCP/IP connection to the data network via Ethernet, configured via Web / USB. The unit should send alarms via an e-mail server and connect to the Network Management System of a company via SNMP/OPC.

Technical specifications:

- Sufficient sensors for measuring the temperature, humidity, etc. in the contained and cooled areas of the server racks should be provided.
- Emergency automatic rear door opening kit in case of cooling failure/high temperature alarm must be provided.

6.0 Rack based power distribution unit: 6/8 nos (for racks with 115U usable space)

Compact power distribution system for use in IT servers and network enclosures. Vertical mounting using the universal support (supplied) for common IT racks. Suitable for fast assembly in IT racks, by means of special “Plug&Play” fastening system (also supplied).

Technical specifications of the “PDU metered”

Input current:	63 A
No. of phases:	3
Number of slots, type EN60320/C13 (per phase/fuse):	24
Number of slots, type EN60320/C19 (total):	6
Number of circuit breakers:	6
Electromagnetic circuit breakers:	16 A, type C
PDU input connector:	EN60309 / CEE
Length of the connection cable:	3 m
Connection cable type:	H05-VV

बोलीदाता का हस्ताक्षर
Sign. of Bidder

TECHNICAL BID (PART - I)

Number of wires:	5
PDU color:	RAL 9005 (black)
Measurement functions:	Measurement of each phase
Recorded values (per phase):	Voltage (V), current (A) and frequency (Hz)
	Active power (kW), active energy (kWh), apparent power (kVA)
	Power factor
	Neutral current measurement
	Fuse monitoring
	(with 32 A/63 A versions)
Voltage accuracy	2%
Current measurement range	0 to 63 A
Current accuracy	2%
Frequency accuracy	2%
Active Power (kW) accuracy	2%
Apparent power (kVA) accuracy	2%
Active energy (kWh) accuracy	1%
Power factor accuracy	2%
Network interface:	RJ45, integrated Web server
Supported protocols:	HTTP, HTTPS, SSL, SSH, NTP,
and Telnet	TCP/IP v4 and v6, DHCP, DNS,
NTP, and	Syslog
	SNMP v1, v2c and v3, XML
	FTP/SFTP (update / file transfer)
	E-mail dispatch (SMTP)
USB port for firmware update and data logging function	Yes
CAN-bus interface:	RJ45, to connect sensors
Protection category:	IP 20 (EN 60529)
Protection category:	Class 3
Overvoltage class:	II
Environmental properties:	RoHS
Storage temperature	-25°C to +70°C
Ambient temperatures	0°C to +45°C
Relative humidity	10 to 95% RH, non-condensing

7.0 Reinforced flooring solution for the datacenter racks (if required)

The location of the datacentre is A wing First Floor CDFD Laboratory building where the load bearing strength (live load) is 400 kg per sq.mt. A reinforced flooring/weight distribution solution for the datacenter racks should be provided if required, such that full load capacity of server racks (800 kg per sq.mt.) can be achieved.

TECHNICAL BID (PART - I)**8.0 Movement of existing servers and racks**

In case there is a need to move the existing Racks / servers, network devices, and cables to install and test new Datacentre Racks or Reinforced flooring. The same should be in the scope of vendors work.

बोलीदाता का हस्ताक्षर
Sign. of Bidder

TECHNICAL BID (PART - I)

VENDOR SHOULD COMPLY WITH THE GIVEN SPECIFICATIONS.

Data Center Server Racks integrated with Rack Based Power Distribution System, Closed Loop Cooling using Liquid Cooling Package, Fire Safety and Monitoring Systems Technical Specifications			
Sl. No.	Requirement	Specifications	Vendor's Compliance
1	Rack	<p>Frame Of sturdy frame section construction. All profile edges are radiused. Removable top & Bottom cover with Cable entry provision. Frames should be bayable, scalable and modular.</p> <p>42U Server Rack the 800 W x 2000 H x 1500 or more D dimensions.</p> <p>Fitted with Front Glass door, & Rear Sheet Steel Door with locking system and handle</p> <p>Rack Design should support closed loop High performance cooling</p> <p>The door should be inter-changeable at site, at any point of time</p> <p>Side panel should be with PU gasket with screw fixing to avoid air leakage</p> <p>Side panel required only at the end of the row, on each side</p>	
		<p>All Racks should be certified according to ISO 9001, 14001, 18001. Complying EIA 310, DIN 41494 and IEC 297 standards</p> <p>Load bearing capacity: 1400KG at Frame & 1000 Kgs on 19" mounting angles.</p> <p>Surface Finish: Nano Ceramic Coated, electro-dipcoat primed to 20 microns and powder coated with textured polyester RAL 7035 to 80 to 120 microns.</p> <p>Rack should be capable of accommodating minimum of 2 Three Phase PDU's at the rear</p>	
2	LCP	The integrated air/water heat exchanger should guarantee a cooling output of up to 55 KW, combined with standard server	

		<p>enclosure dimensions, the lowest possible weight and comprehensive possibilities for monitoring.</p> <p>The air/water heat exchanger should be mounted on the side of the rack..</p> <p>LCP Rack CW should offer enclosure-based cooling separate from the room air and is thus also able to reduce the noise level</p> <p>Hot air from the server/network equipment should be drawn off to the rear of the rack. After cooling, it should expelled to the left and right in front of the 19" level over the whole enclosure height and is thus made available to the IT equipment once more.</p> <p>The use of an integrated EC fan module should achieve maximum efficiency and minimizes the electrical energy consumption.</p>	
3	Intelligent Power Distribution Unit (I--PDU)	Vertical metered iPDU 32 Amp 3 Phase with 24 Nos C-13 and 6 Nos C-19 sockets with 32 MCB with cover, Power cord of length 3 mtr with 5 pin industrial plug & socket.	
4	Environmental Controls & Monitoring	Each set of intelligent rack should include IP based basic environmental controls of following features:	
		Temperature/ Humidity Sensor	
		Water Leak Detection system	
		Automatic emergency door opening kit	
		Access control - Biometric reader for front door	
5	Cable Management	<p>The manufacturer should supply 2 No finger type cable management with detachable door for management of Horizontal Cables</p> <p>2 x Loop type / Closed Type Cable Organize for Management of Horizontal and power cables</p>	

		2 x 300mm Cable basket for Management of Vertical Cables	
6	Fire Suppression system:	In built Suppression system with novoc1230 gas cylinder with automatic gas release tube.	
7	Warranty & Support:	3 year Comprehensive on-site advance replacement warranty for all the quoted items	
8	Reinforced flooring solution for the datacenter racks (if required)	Reinforced flooring solution for the datacenter racks (if required)	
9	Movement of Racks / servers, network devices, and cables	Movement of existing Racks / servers, network devices, and cables to install and test new Datacentre Racks	

General specifications for modular UPS -80 KVA (N+1) with external battery bank for 15 minutes

4.1 SUMMARY

This specification describes the modular UPS of 80 kVA/72 KW with Additional Redundant Power Module (N+1) , a modular uninterruptible power supply system for IT applications. It defines the electrical and mechanical characteristics and requirements for a continuous-duty three-phase, solid-state, on-line double conversion static uninterruptible power supply system. The uninterruptible power supply system shall provide high-quality AC power.

4.2 STANDARDS

The UPS shall be designed in accordance with the applicable sections of the current revision of the following documents. Where a conflict arises between these documents and statements made herein, the statements in this specification shall govern. Safety Standard:

Electromagnetic Compatibility Standard (EMC)

Performance Standard:

EN 62040-1-1:2003
EN 60950-1:2001/A11:2004

EN 62040-2:2005
EN 61000-3-2:2000
EN 6100-3-3:1995/A1:2001
EN 61000-6-2:2001
EN 61000-6-4:2001
EN 62040-3:2001

बोलीदाता का हस्ताक्षर
Sign. of Bidder

TECHNICAL BID (PART - I)

4.3 SYSTEM DESCRIPTION

4.3.1 General

The UPS shall utilize a rack-mounted N+1 redundant, scalable array architecture of 80KVA / 72KW. The system power train shall be comprised of unique rating power modules and be capable of being configured for N+X redundant operation at the rated system load. In systems operating at a load where the system is N+1 or greater, the UPS shall facilitate the replacement of power modules while the system remains in normal operation, without the requirement to transfer to bypass (hot swappable).

Each power module contains a fully rated, power factor corrected input rectifier / boost converter, a fully rated output inverter, and battery charging circuit. The system shall also be comprised of a hot swappable continuous duty bypass static switch module, Maintenance Bypass switch, redundant control modules, and redundant logic power supplies, and touch screen user interface/display. All of the above system components are housed in a standard sized Rack.

The UPS and associated equipment shall operate in conjunction with a primary power supply and an output distribution system to provide quality uninterrupted power for mission critical, electronic equipment load.

4.3.2 Redundant operation

The UPS system will operate in an N+X configuration where N is the number of UPS units connected in parallel to support the load and X is the number of UPS units connected in parallel to provide the co-efficiency of redundancy.

The parallel UPS units shall be capable of operation from a common DC bus or with a separate DC supply for each UPS unit. In either case the batteries should be configured so that the failure of one battery string (common DC. bus) or the failure of one battery set (separate DC supply for each UPS) provides battery redundancy whereby the specified autonomy at full load is maintained.

The malfunction of one of the UPS unit's power or control modules shall cause that particular UPS unit to be automatically isolated from the system and the remaining UPS units shall continue to support the load. Replacement or repair of a UPS unit shall be achieved without disturbance to the connected load (to be save swappable).

4.3.3 Modes of Operation

The UPS shall be designed to operate as a true on-line, double conversion Voltage and Frequency Independent (VFI) system in the following modes:

A. Normal - The critical AC load is continuously supplied by the UPS inverter. The input converter derives power from the utility AC source and supplies DC power to the inverter. The battery charger shall maintain a float-charge on the battery.

B. Battery - Upon failure of utility AC power the critical AC load is supplied by the inverter, which obtains power from the battery. There shall be no interruption in power to the critical load upon failure or restoration of the utility AC source.

बोलीदाता का हस्ताक्षर
Sign. of Bidder

TECHNICAL BID (PART - I)

C. Recharge - Upon restoration of utility AC power, after a utility AC power outage, the input converter shall automatically restart and resume supplying power to the inverter. Also the battery charger shall recharge the battery. In addition to the input conversion soft start of each UPS module, when a mains recovery occurs, all single input converters shall switch on in a sequential way with a delay of about 5 seconds from each to the other module within the system configuration.

D. Automatic Restart - Upon restoration of utility AC power, after a utility AC power outage and complete battery discharge, the UPS shall restart by manually reset and resume supplying power to the critical load on inverter.

E. Bypass - The bypass shall provide an alternate path for power to the critical load that shall be capable of operating in the following manner:

1. Automatic - In the event of an internal failure or should the inverter overload capacity be exceeded, all UPS modules shall perform an automatic transfer of the critical AC load from the inverter to the bypass source.
2. Eco-Mode – The UPS module(s) shall be able to operate in Eco-Mode when the power quality parameters of the by-pass source are within the permissible tolerances. The UPS system shall automatically transfer the load to normal mode if the by-pass source goes out of permissible tolerances. Transfer in both directions shall take place very rapidly (< 5milli seconds) and shall not affect the supplied load.
3. Manual - Should the UPS module(s) need to be taken out of service for limited maintenance or repair, manual activation of the bypass shall cause an immediate transfer of the critical AC load from the inverter to the bypass source.

4.3.4 Environmental conditions

The UPS system shall be designed to operate continuously at full load without degradation of its reliability, operating characteristics or service life in the following environmental conditions:

- UPS ambient temperature range: 0°C to 50°C,
- Battery ambient temperature range: 20°C to 25°C
- Humidity: 5 to 95% RH non-condensing
- Storage: UPS: -5 °C to +50 °C ;

Battery : -20 °C to 25 °C for maximum 6 months

1. Altitude: Maximum installation with no-derating of the UPS output shall be 3,000ft (1000m) above sea level. For higher altitudes the UPS capacity shall be de-rated as per standards.

Audible Noise (as measured three feet from surface) 65 dBA at 100% load

2 .The UPS system shall be designed for operation in altitudes up to 1000 metres, without the need for derating or reduction of the above environmental operating temperatures.

3. The audible noise generated by the UPS system during normal operation shall not exceed 65 dBA per Module measured at 1 metre from the surface of the UPS.

बोलीदाता का हस्ताक्षर
Sign. of Bidder

TECHNICAL BID (PART - I)

4. The UPS system shall be able to withstand a minimum 15kV electrostatic discharge without affecting the critical load.
5. To permit access through a standard single doorway opening, either the width or the depth of the UPS and battery cabinets shall not exceed 750mm.
6. The UPS system cabinet shall comprise of a floor standing steel enclosure to house the power system, control systems, battery connections and all associated necessary connections for the correct operation of the UPS in accordance with the requirement of the specifications. All switchgear and interconnections must be adequately protected to enable an isolated section to be safely maintained or repaired whilst the remaining system supports the load.
7. The UPS system shall be designed to limit the injection of current harmonics in to the incoming utility supply and as such the maximum total input current harmonic distortion should not exceed 5 % THDi when the UPS system is operating at the UPS manufacturer's specified rating.

4.3.5 User Documentation

The specified UPS system shall be supplied with one (1) user's manual. Manuals shall include installation drawings and instructions, a functional description of the equipment with block diagrams, safety precautions, illustrations, step by step operating procedures, and routine maintenance guidelines.

4.3.6 Warranty

The UPS manufacturer shall warrant the UPS against defects in materials and workmanship for 3 Years. The warranty shall cover all parts and onsite labor for 3 Years.

4.3.7 Quality Assurance

1. Manufacturer Qualifications

A minimum of 10 years' experience in the design, manufacture, and testing of solid-state UPS systems is required.

2. Factory Testing

Before shipment, the manufacturer shall fully and completely test the system to assure compliance with the specification. These tests shall include operational discharge and recharge tests on the internal battery to guarantee rated performance. Client Engineer should inspect the materials before dispatch from manufacturing site/ OEM site.

4.4 PRODUCT SPECIFICATIONS

4.4.1 Fabrication

All materials and components making up the UPS shall be new, of current manufacture, and shall not have been in prior service except as required during factory testing. The UPS shall be constructed of replaceable subassemblies.

बोलीदाता का हस्ताक्षर
Sign. of Bidder

TECHNICAL BID (PART - I)

4.4.2 Wiring

Wiring practices, materials, and coding shall be in accordance with the requirements of the EN 62040-1 and other applicable codes and standards.

4.4.3 UPS Cabinet

The UPS system of 80KVA MODULAR rating comprised of: power module, battery connections, system interconnect module and user interface module housed in a single free-standing enclosure and meets the requirements of IP20. The UPS system shall be designed such that the battery modules may be installed into any module bay in the cabinet and power modules into any module bay in the upper half of the cabinet. The UPS cabinet shall be cleaned, primed, and powder coated

4.4.4 UPS module

Each UPS module should be of minimum 20KVA /18KW Rating shall have hot-swappable capability. In a parallel redundant system, if one UPS module fails, the UPS system shall have the capability to replace the faulty UPS module without transfer the load on by-pass.

4.4.5 Cooling

The UPS shall be forced air cooled by internally mounted fans.

4.5 UPS INPUT SUPPLY

The system input shall be configurable as either single or dual mains derived from a three phase Wye source. Standard cable entry is through the top. Bottom cable entry can also be facilitated. Depending on the specific configuration, the use of the optional Bottom Feed Enclosure may be required.

An option shall be available to facilitate the connection of NEMA 2 compression lugs for main input, bypass input, DC input and output cable connections.

1. AC Input Nominal Voltage:

System voltage shall be selectable at the front panel by service personnel with the following options: 380V, 400V and 415V

2. AC Input Voltage Window:

+/-15% for full performance
-20% with reduced charge power
-50% for reduced load (240V at 480V)

3. Maximum Frequency Range: 40-70Hz

Frequency is synchronized to bypass input when available over the standard range of 57 to 63Hz. Optional frequency tolerance range is configurable from 0.5% to 8% from front panel.

4. Input Power Factor:

Greater than 0.995 with load at 100%
Greater than 0.99 with loads above 50%
Greater than 0.97 with loads above 25%

5. Input current in Normal operation shall be limited to a maximum of 137% of the system capacity

बोलीदाता का हस्ताक्षर
Sign. of Bidder

TECHNICAL BID (PART - I)

6. Input current Distortion with no additional filters: less than 5%
7. Soft-Start: Shall be linear from 0-100% input current and shall not exhibit inrush. This shall take place over a user selectable 1-60 second time period with a factory default of 10 seconds.

4.6 UPS OUTPUT

1. AC Output Nominal Output:
System voltage shall be selectable at the graphical user interface by service personnel with the following options: 380V, 400V, 415V and 480 V
2. AC Output Voltage Distortion: Less than. 2% @ 100% Linear Load. Less than 6% for SMPS load as defined by EN50091-3/IEC 62040-3
3. AC Output Voltage Regulation: +/- 1% For 100 % Linear or Nonlinear Load
4. Voltage Transient Response: +/-5% maximum RMS change in a half cycle at load step 0% to 100% or 100% to 0%.
5. Voltage Transient Recovery within <50 milliseconds
6. Output Voltage Harmonic Distortion:
 - a. <2% THD maximum and 1% single harmonic for a 100% linear load
7. Phase Angle Displacement:
 - a. 120 degrees +/-1 degree for balanced load
 - b. 120 degrees +/-1 degrees for 50% imbalanced load
 - c. 120 degrees +/-3 degrees for 100% imbalanced load
- Overload Rating:
 - a. Normal Operation:
 - 1) 150% for 60 seconds before transfer to Bypass
 - 2) 125% for 10 minutes before transfer to bypass
 - b. Battery operation
 - 1) 125% for 30 seconds
 - c. Bypass Operation:
 - 1) 125% continuous at 480V
 - 2) 1000% for 100 milliseconds
9. System AC-AC Efficiency:

Normal operation > 94% at 40% - 100% load
10. Output Power Factor Rating: 0.5 leading to 0.5 lagging without any derating

4.7 COMPONENTS

4.7.1 Input Converter

A. General

Incoming AC power shall be converted to a regulated DC output by the input converter for supplying DC power to the inverter. The input converter shall provide input power factor and input current distortion correction.

बोलीदाता का हस्ताक्षर
Sign. of Bidder

TECHNICAL BID (PART - I)**B. AC Input Current Limit**

The input converter shall be provided with AC input over current protection.

C. Input Protection

The UPS shall have built-in protection against undervoltage, overcurrent, and overvoltage conditions including low-energy surges introduced on the primary AC source and the bypass source. The UPS cabinet shall not contain an input breaker. The customer shall supply an input breaker sized to supply the rated load and to recharge the battery at the same time.

D. Battery Recharge

To prolong battery life, the UPS shall contain temperature-compensated battery charging. The battery charger shall be ripple-free avoiding premature battery ageing.

4.7.2 Inverter**A. General**

The inverter shall convert DC power from the input converter output, or the battery, into precise regulated sine wave AC power for supporting the critical AC load.

B. Overload

The inverter shall be capable of supplying current and voltage for overloads exceeding 100% and up to 150% of full load current for timing as specified above. A visual indicator and audible alarm shall indicate overload operation.

For greater currents or longer time duration, the inverter shall have electronic current-limiting protection to prevent damage to components. The inverter shall be self-protecting against any magnitude of connected output overload. Inverter control logic shall sense and disconnect the inverter from the critical AC load without the requirement to clear protective fuses. The load shall be transferred to bypass when any of the above conditions are exceeded.

C. Output Frequency

The output frequency of the inverter shall be controlled by an oscillator. The oscillator shall hold the inverter output frequency to +/- 0.1% for steady state and transient conditions. The inverter shall track the bypass continuously providing the bypass source maintains a frequency within the user selected synchronization range. If the bypass source fails to remain within the selected range, the inverter shall revert to the internal oscillator.

D. Output Protection

The UPS inverter shall employ electronic current limiting.

E. Battery over Discharge Protection

To prevent battery damage from over discharging, the UPS control logic shall control the shutdown voltage set point. This point is dependent on the rate of discharge.

TECHNICAL BID (PART - I)**4.7.3 Display and Controls****A. General**

The front panel will consist of LEDs (one for each UPS module), switches, and a two line by twenty-character backlit LCD display for additional alarm/configuration information (one for each UPS module). During normal operation (on-line), all mimic display LEDs shall be green in colour and indicate the following:

If there is a fault condition, the UPS shall attempt to maintain conditioned power to the load or at minimum transfer to bypass.

There shall also be indication on each module should the module fail and need to be replaced.

In addition to a visual fault signal (alarm), the UPS shall also record fault occurrences in a rolling event log. The event log on the standard unit shall record up to 64 occurrences, with the oldest events discarded first, etc. The user shall have access to the event log through the LCD display. Every alarm and/or event recorded in the event log will contain a time and date stamp.

B. Audible Alarms

The volume of all audible alarms shall be at least 65dBA at a distance of one meter. An audible alarm shall be used in conjunction with the LED/LCD indication to indicate a change in UPS status.

The audible alarms shall warn for utility line loss, low battery (while on battery), and all other alarm conditions. For all alarm conditions, the user must look at the display to determine the cause of error/alarm. All alarm tones shall be a continual tone until the condition rectifies itself or the alarm is silenced. Once silenced, the audible alarm shall not sound until a new alarm condition is present, but the LED indication still warning the alarm condition.

C. Alarm Silence Button

In addition to the double load on/off switch, the user interface shall include an audible 'Reset' switch. If the alarm silence (Reset) switch is pressed for one second, all current audible alarms shall be disabled. If a new alarm occurs, or a cancelled alarm condition disappears and then re-appears, the audible alarm is re-enabled.

D. LCD Display

The LCD display shall be used to provide information to the user. The display shall be able to provide the following measurements information:

Voltages: Input converter (Phase 1-2-3/Neutral)

Input by-pass (Phase-1-2-3/Neutral) UPS output (Phase 1-2-3/Neutral)

Battery Current: UPS output (PH1-2-3) Battery charging / discharging Frequency: UPS

Input UPS output Battery: Remaining back-up time (minutes) Capacity (%) Others: UPS output active power (kW), (Phase 1-2-3/Neutral)

UPS output reactive power (Kvar), (Phase 1-2-3/Neutral) UPS output apparent power (kVA), (Phase 1-2-3/Neutral) UPS load (%), (Phase 1-2-3)

बोलीदाता का हस्ताक्षर
Sign. of Bidder

TECHNICAL BID (PART - I)

4.7.4 Automatic Battery Test

The UPS shall initiate an automatic battery testing sequence periodically (once a month), at a programmed day and time of day, selectable by the end user. The user will be able to enable and disable the automatic battery test.

Should a failure of the battery occur, the UPS will immediately return to normal mode and fault signals (visual, audible, and remote via serial) shall be communicated. No audible or remote (via serial/contact closures) indication of the battery test shall be communicated during the duration of the automatic battery test.

The automatic battery test shall be able to operate only if no alarm conditions affect the UPS and if the battery is at least 90% of its full capacity.

4.7.5 Bypass

A. General

A bypass circuit shall be provided as an integral part of the UPS module. The bypass control logic shall contain an automatic transfer control circuit that senses the status of the inverter logic signals, and operating and alarm conditions. This control circuit shall provide a transfer of the load to the bypass source, without exceeding the transient limits specified herein, when an overload or malfunction occurs within the UPS.

B. Automatic Transfers

The transfer control logic shall automatically activate the bypass, transferring the critical AC load to the bypass source, after the transfer logic senses one of the following conditions:

- Inverter overload capacity exceeded
- Inverter over temperature
- UPS fault condition (non redundant configuration)

For inverter overload conditions, the transfer control logic shall inhibit an automatic transfer of the critical load to the bypass source if one of the following conditions exists:

- Inverter/Bypass voltage difference exceeding preset limits (-20/+15 % of nominal load @ 100 % load)
- Bypass frequency out of preset limits (± 4 % or ± 2 % of nominal frequency)

C. Automatic Retransfer

Retransfer of the critical AC load from the bypass source to the inverter output shall be automatically initiated unless inhibited by manual control. The transfer control logic shall inhibit an automatic retransfer of the critical load to the inverter if one of the following conditions exists:

- Bypass out-of-synchronization range with inverter output
- Overload condition exists in excess of inverter full load rating
- UPS fault condition present (non redundant configuration)

बोलीदाता का हस्ताक्षर
Sign. of Bidder

TECHNICAL BID (PART - I)

D. Manual Transfer

In addition to the internal bypass function, the UPS shall have a manual bypass function. The manual bypass function shall be provided via a switch mounted on the bottom-front of the UPS, removal of the lower front bezel shall be required. In case of wrong manual bypass manipulation (transferring the load on manual by-pass when the load is supplied by the inverter (Normal-mode)), the UPS module(s) shall be auto protected avoiding any UPS damage.

The UPS shall initiate an audible alarm upon transfer to manual bypass. The audible alarm shall be capable of being silenced by the user. The alarm shall continue to sound (unless silenced) while in bypass mode. This shall provide a reminder to the user that the load continues to be powered from utility supply alone.

4.8 BATTERIES

A. The battery system shall be sized to support a load as indicated in BOQ considering 0.8 as load power factor for a minimum of 15minutes at an ambient temperature of 25 °C as specified in the Bill of Materials/Quantities.

The battery system shall consist of gas recombination, valve regulated, lead acid cells, Flame retardant batteries shall be provided, which renders the UPS suitable for installation inside a computer room.

B. The UPS shall have the capability to add external battery cabinets to the base product. These external battery cabinets with front access battery terminals shall be installed in parallel to provide backup times as required. The connections between the UPS and the extended battery cabinets shall contain DC power only. All of these shall be able to be connected or disconnected safely by the user without interrupting power to the load.

C. The UPS battery charging circuit shall comprise of a separate battery charger and not depend on a charge voltage being derived from the UPS input rectifier. Consequently, the battery charging voltage shall have zero AC (ripple) content.

D. For single UPS systems the battery system shall consist of a minimum of 2 parallel strings of multiple cells. Each individual parallel string shall have its own dedicated means of electrical protection.

E. The batteries shall be housed in MS Rack with dimensions and paint finish to match the UPS system cabinet/s to form a continuous suite when standing immediately adjacent to the UPS system cabinet/s. The battery cabinet/s shall have full width opening doors to permit ease of access for the purposes of maintenance and/or repair of the batteries. The battery cabinets shall be sized keeping in view the weight / kgs is within the permissible limits of structural slab of the building. Supplier to check with clients & their representatives about the structural strength of the building before designed the cabinets or MS racks.

F. The UPS DC bus voltage shall be 40 blocks

4.9 COMMUNICATIONS

Network Communications

The UPS shall have SNMP card to provide SNMP communication over a local area network and should be compatible with BMS.

बोलीदाता का हस्ताक्षर
Sign. of Bidder

TECHNICAL BID (PART - I)**4.10 MINIMUM ELIGIBILITY CRITERIA**

- The vendor / OEM should have experience of supplying & commissioning Modular UPS system for min 5 years in INDIA Market (Suitable document as proof should be submitted along with tender.
- The vendor / OEM should have min 50+ Modular UPS Installation in India (Suitable document as proof should be submitted along with tender
- The vendor/ OEM should have manufacturing set up in India for Modular UPS system with all necessary spares support guarantee (OEM should procure letter confirming the above in their letter head).
- Similar nature of works should be done during last 5 years in Central/State governments/ Autonomous bodies of State/Central or PSU's pf Government of India/Local Governments.

VENDOR SHOULD COMPLY WITH THE GIVEN SPECIFICATIONS.

MODULAR UPS Technical Specifications			
Sr. No.	Requirement	Specifications	Vendor's Compliance
1	Capacity (in kVA / kW)	80kVA/72kW 3-Phase Input / 3-Phase Output with additional Redundant Power Module for N+ 1 (20KVA x 4 Hot swappable Power Modules)	
2	Technology and Capability	a) True Online configuration double conversion UPS.	
		b) Modular & Scalable UPS with hot swappable Power Module of 20kVA / 18kW.	
		c) DSP (Digital Signal Processor) / Microprocessor based control, using SCR/IGBT devices and high switching frequency PWM.	
		d) PFC controlled rectifier with Active power factor Correction (APFC).	
		e) Capability to operate in N+1 / N+X PRS -Parallel Redundant Configuration.	
		f) Capability of independent or common battery bank operation of the UPS when operated in PRS.	
3	Model Name & Number		
	80kVA /72KW	Make / Model / Part No must be specified	
4	Input		
4.1	Input facility -Phases / Wires	3-Phase / 4-Wire &Gnd (R, Y, B -Phases & Neutral + Ground)	
4.2	Nominal Input	380 / 400 / 415V AC	

	Voltage		
4.3	Input Voltage Range	300 - 477 V AC (On Full Load)	
		208 - 477 V AC (On 70% Load)	
4.4	Nominal Input Frequency	50 / 60 Hz (Auto selectable)	
4.5	Input Frequency Range	45 to 55 Hz	
4.6	Input Power Factor	> 0.99 on Full resistive load Load	
4.7	Input Current Harmonic Distortion (THDi)	< 5 % on Full Load (with Mains THDu less than 1%)	
4.8	Generator Compatibility	Compatibility to genset supply required	
4.9	Input Protection (Thru In-built 3P MCCB)	Input to Rectifier	
		Input to Bypass	
		Manual Bypass (In-built)	
5	Output		
5.1	Nominal Output Voltage	380 / 400 / 415VAC (Selectable)	
5.2	Output Voltage Regulation	+/- 1%	
5.3	Nominal Output Frequency	50 / 60 Hz (Selectable)	
5.4	Output Frequency Regulation	+/- 0.05 Hz (Free Running / Self Clocked Mode)	
		+ / - 5 % (Synchronized to Mains Mode, Selectable)	
5.5	Output Frequency Slew Rate	1 Hz / s	
5.6	Output Wave Form	Pure sine wave	
5.7	Output Voltage Distortion (THDu)	<= 3% (For 100% Linear / Resistive Load)	
		<= 5% (For 100% Non-Linear / RCD Load)	
5.8	Crest Factor	3 : 1 On Full Load	
5.9	Unbalanced load on phases	100% unbalanced load should be allowed	
5.1	Voltage symmetry with 100% Unbalanced Load	+/- 1%	
5.11	Displacement angle for 100% balanced Load	120 deg +/- 2 deg	
5.12	Output Protection	Thru In-built 3P MCCB	
6	Transient Response / Recovery		
6.1	Transient response: Dynamic regulation for 0% to 90 % step	+/- 5%	

	load		
7	Transfer Time		
7.1	Transfer Time (Mode of operation)	Nil from Mains mode to Battery Mode Nil from Battery Mode to Mains mode	
7.2	Transfer Time (Inverter to Bypass / Bypass to Inverter)	< 1 ms (Synchronized Mode) < 10 ms (Asynchronized Mode)	
7.3	Automatic & Bi-directional static bypass (In-built)	Should be provided to take care of uninterrupted transfer of load from Inverter to bypass (under overload / fault conditions) & automatic retransfer from bypass to inverter (on removal of overload / fault conditions)	
8	Efficiency (At Nominal Voltage & Resistive Load up to kW rating of UPS)		
8.1	Overall Efficiency (AC to AC) - Online (Double Conversion)	94%	
8.2	Inverter Efficiency (DC to AC) - Battery Mode of operation	>94%(On Full Load)	
8.3	Eco mode efficiency	>97%	
9	Overload		
9.1	Inverter Overload capacity (Mains Mode & Battery Mode)	125% for 10 minutes 150% for 60 seconds	
10	Display Panel (In-build LC Display & LED)		
10.1	Measurements (On LCD)	Input: Voltage / Frequency Bypass: Voltage / Frequency Output: Voltage / frequency / Current Battery: Voltage / Capacity Load: In kVA / kW / Percentage Temperature: STS/Inverter/PFC	
10.2	Event Logging & Statistical Data (On LCD): UPS should capture and display up to 500 events	Events like: Over temperature / DC Bus Fail / Fan Fail / Fuse Fail / Overload / Short-circuit / Device Fail / Inverter Fail / Rectifier Fail / Bypass Fail, etc Statistical Data: No. of power failures / Transfers to Bypass / Total Running time, etc	
10.3	User Programmable Parameters & Settings (On LCD)	Bypass: Voltage / Frequency Range Inverter: Voltage / Frequency / Eco Mode / Frequency converter / Redundancy selection Battery: Type / Banks / Chargers Current / Manual & Automatic Testing Alarms: Buzzer & LED Test / Buzzer Mute Date & Time Setting Password: User / Administrator Setting	

		Information: UPS Serial No. / Firmware Log & Statistical Data Reset & Firmware upgrade	
10.4	Indications (LED)	Mains Mode of Operation /Battery Mode of Operation / Bypass feeding the load / UPS Fault	
11	Alarms		
	Audible Alarms	Mains Failure / Battery Low Alarm / UPS Overload / Fault / Shutdown	
12	Battery Backup / Battery Bank & Charger		
12.1	Backup Required	15 MINUTES ON 60KVA /54 KW LOAD	
12.2	Battery Bank Voltage	± 240 V DC or more	
12.3	Battery Bank V Ah (Vendor to include battery sizing calculations with tender)	min 40300 VAH	
12.4	Batteries Type	VRLA (AGM) Sealed Maintenance Free (SMF) - 12V Cells	
12.5	Battery Makes	Amara Raja / Exide / HBL / Rocket / Equal Brands	
12.6	Number of Battery Banks	1 per each UPS system	
12.7	Minimum Charger Rating (Including internal / external)	10% of Battery Ah rating offered	
12.8	Charger type / Charging Method & Charging Voltages	Constant Voltage Constant Current Solid state SMPS charger designed for at least 10% of Battery Ah offered Float Voltage: 2.25 VPC Boost Voltage: 2.32 VPC	
12.9	Battery recharge time (After complete discharge) to 90% capacity	10-12 hours	
12.1	Battery Protection (Vendor to specify the rating)	Electronic switch (SCR) & Fuse	
12.11	Battery Housing (Vendor to provide the GA drawings of the offered Battery Rack)	Should be compact and space saving MS steel open racks complete with interconnectors / Battery fuse box or isolator (in case of external protection)	
12.12	Battery End Cell Voltage	1.75 VPC	
13	Interfaces		

13.1	Serial Communication Port	RS232: Should be provided as standard	
13.2	REPO (Remote Emergency Power Off)	Provided in-built in the UPS	
13.3	Interface to NMS (Network Management System) - To be quoted as option	SNMP Card for connecting the UPS to LAN thru Ethernet port & monitoring thru NMS	
13.4	Interface to BMS (Building Management System) - To be quoted as option	ModBus Card for connecting to UPS to BMS thru RS485 & monitoring thru BMS	
13.5	Interface to DCS (Distributed Control System) - To be quoted as option	Relay I/O Card or PFC (Potential free contacts) for connecting to UPS to DCS / PLC / SCADA system for communication UPS operating status	
14	Restart / Testing Capability		
14.1	Automatic Restart	UPS should start up automatically on mains resumption after battery low shutdown	
12.2	Battery Self Test	Manual / Scheduled battery test to ensure healthiness of batteries. However in event of weak batteries, test should be aborted and fault reported to the user thru replace battery warning	
15	Physical		
15.1	Operating Temperature	0 to 40 deg C	
15.2	Storage Temperature	-20 to 40 deg C	
15.3	Operating Humidity	0 to 90% RH (Non-condensing)	
1.4	Operating Altitude	3000 m.a.s.l (meters above sea level)	
15.4	Protection Class	IP – 20	
15.5	Type of Cooling	Forced Air	
15.5	Noise Level	< 70 dbA at 1 meter distance	
15.6	Form Factor	Free Standing Floor Mounted UPS	
15.7	UPS Dimension (w x d x h) in mm	Should be very company with minimum 520 x 910 x 1165	
15.8	Weight - in kg	To be furnished by the vendor	
15.9	Reliability	MTBF greater than 100000 hours	
15.1	Packaging Material	Recyclable (No CFC)	
15.11	Connections - Rectifier Input / Output / Bypass Input / Battery	Hardwired	

16	Certifications		
16.1	Manufacturer	QMS: As per ISO 9001: 2008	
		EMS: As per ISO 14001: 2004	
		OSHAS: As per ISO 18001: 2007	
16.2	Product	Safety: As per EN62040-1-2	
		EMC: As per EN62040-2	
		ESD: As per IEC61000-4-2 Level 4	
		RF: As per IEC61000-4-3 Level 3	
		FT/Burst: As per IEC61000-4-4 Level 4	
		Surge: As per IEC61000-4-5 Level 4	
		CE Declaration of Conformance	

बोलीदाता का हस्ताक्षर
Sign. of Bidder

TECHNICAL BID (PART - I)**अध्याय CHAPTER 5****अन्य प्रारूप OTHER FORMATS**

- a. Bid Form (Bid Covering Letter) - (Annexure-A)
- b. Manufacturers' Authorization Form - (Annexure-B)
- c. Bid Security Form / Earnest Money Deposit Form - (Annexure-C)
- d. List of Orders Executed - (Annexure-D)
- e. Undertaking for Reasonable Price – (Annexure-E)
- f. Performance Certificate – (Annexure-F)
- g. Check List - (Annexure-G)

बोली फार्म (बोली आवरण पत्र)**BID FORM (BID COVERING LETTER) - Annexure-A**

[The Bidder shall type this Form on their Letter Head and enclose this along with Bid.]

To:

**The I/c – Stores & Purchase
Centre for DNA Fingerprinting & Diagnostics,
Inner Ring Road, HYDERABAD – 500039.**

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents, including Addenda (if any)
- (b) We offer to supply in conformity with the Bidding Documents and in accordance with the Delivery Schedules specified in the Tender Document
- (c) Our bid shall be valid for from the date fixed for the bid submission deadline, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (d) If our bid is accepted, we commit to obtain a performance security for due performance of the Contract;
- (e) We understand that this bid, together with your written acceptance thereof included in your notification of award/placement of Order, shall constitute a binding contract between us.
- (f) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.

Signed:

Name:

Duly authorized to sign the bid for and on behalf of:

Dated on _____ day of _____, _____

TECHNICAL BID (PART - I)**निर्माता 'प्राधिकरण फार्म****MANUFACTURERS' AUTHORIZATION FORM - Annexure-B**

No:
The I/c – Stores & Purchase,
Centre for DNA Fingerprinting & Diagnostics,
Inner Ring Road, HYDERABAD – 500039.

Dated: _____

Dear Sir:

We _____ who are established and reputed manufacturers of the equipment having factories at _____ (address of factory) do hereby authorize M/s. (Name and address of Agent) to submit a bid, negotiate and receive the order from you against your Tender No. _____ dt. _____.

No company or firm or individual other than M/s. _____ is authorized to bid, and conclude the contract in regard to this business.

We hereby extend our full guarantee and warranty as per the Terms and Conditions of the above Tender for the goods and services offered by the above firm.

Yours faithfully,

(Name)
(Name of manufacturers)

Note: This letter of authority should be on the **letterhead of the manufacturer** and should be signed by a person competent and having the power of attorney to bind the manufacturer. It should be enclosed by the Bidder in its bid.

TECHNICAL BID (PART - I)**बोली सुरक्षा / अर्नेस्ट पैसा जमा फार्म****BID SECURITY / EARNEST MONEY DEPOSIT FORM – Annexure-C**

Whereas _____ (hereinafter called the tenderer) has submitted their offer dated _____

for the supply of _____ (hereinafter called the tender) Against the purchaser's tender enquiry No. _____

KNOW ALL MEN by these presents that WE _____ of _____ having our registered office at _____ are bound unto _____ (hereinafter called the "Purchaser") In the sum of _____

For which payment will and truly to be made to the said Purchaser, the Bank binds itself, its successors and assigns by these presents.

Sealed with the Common Seal of the said Bank this _____ day of _____ 20 _____.

THE CONDITIONS OF THIS OBLIGATION ARE:

- (1) If the tenderer withdraws or amends, impairs or derogates from the Tender in any respect within the period of validity of this tender.
- (2) If the tenderer having been notified of the acceptance of his tender by the Purchaser during the period of its validity:
 - a) If the tenderer fails to furnish the Performance Security for the due Performance of the contract.
 - b) Fails or refuses to accept/execute the contract.

We undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it owing to the occurrence of one or both the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including 45 days after the period of tender validity and any demand in respect thereof should reach the Bank not later than the above date.

(Signature of the authorized officer of the Bank)

Name and designation of the officer

Seal, name & address of the Bank and address of the Branch

TECHNICAL BID (PART - I)

निष्पादित आदेशों की सूची
LIST OF ORDERS EXECUTED – ANNEXURE – D

Sl. No.	CLIENT – 1	CLIENT – 2	CLIENT – 3
1.	Name & Address of the Purchaser	Name & Address of the Purchaser	Name & Address of the Purchaser
2.	Purchase Order No. and Date	Purchase Order No. and Date	Purchase Order No. and Date
3.	Description of material:	Description of material:	Description of material:
	Make/Model:	Make/Model:	Make/Model:
	Qty:	Qty:	Qty:
4.	Date of Installation	Date of Installation	Date of Installation
5.	Contact Details	Contact Details	Contact Details
	Name: _____	Name: _____	Name: _____
	Email: _____	Email: _____	Email: _____
	Tel. No.: _____	Tel. No.: _____	Tel. No.: _____

Please note that priority of selection of your bid will be based on the above credentials. Therefore please submit at least 2 order details successfully executed during the past 3 years.

बोलीदाता का हस्ताक्षर
Sign. of Bidder

TECHNICAL BID (PART - I)**उचित मूल्य के लिए उपक्रम****UNDERTAKING FOR REASONABLE PRICE – ANNEXURE - E**

This is to Certify that we have offered the possible reasonable prices vide our quote No. _____

and we further undertake that we will not offer less than the offered rates during the validity period to any other State /

Central / PSU / Autonomous Bodies / Universities / R&D Institutes / Pharmaceutical Laboratories / Public Limited Companies.

Place:

Date:

सील के साथ बोलीदाता का हस्ताक्षर
Sign. of Bidder with Seal

TECHNICAL BID (PART - I)**प्रदर्शन प्रमाण
PERFORMANCE CERTIFICATE – Annexure-F****Date:** _____**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that _____ (Name of the Bidder) had supplied _____ (Equipment Name) and provided the necessary support during the period from _____ to _____ and their performance is _____.

This certificate is issued at their request.

(Authorized Signatory)**Name:****Seal:**

TECHNICAL BID (PART - I)

जाँच सूची
CHECK LIST - Annexure-G

S. No.	Particulars	Indicate Yes/No	Enclosure No.
1	Tender Document Fee DD		
2	Bid Form (Bid Covering Letter) attached		
3	Detailed Quotation along with Terms & Conditions		
4	Copy of Firm Registration / VAT / TOT attached		
5	Copy of GST attached		
6	Authorization Certificates from OEM attached		
7	Earnest Money Deposit/BG attached		
8	Exemption claimed for EMD / BG and proof attached		
9	Photocopies of Purchase Orders / Installation Reports as per eligibility Criteria attached		
10	UAM Copy enclosed or not		
11	List of Orders Executes		
12	Undertaking for Reasonable Price offer		
13	Performance Certificate		
14	CDFD Tender Document duly signed and stamped attached		

SIGNATURE OF BIDDER WITH SEAL:

Email ID:

Contact Number:

Name:

PRICE BID (PART - II)

निविदा दस्तावेज
TENDER DOCUMENT

के लिये
FOR

DATA CENTER SERVER RACKS INTEGRATED WITH
RACK BASED POWER DISTRIBUTION SYSTEM,
CLOSED LOOP COOLING USING LIQUID COOLING
PACKAGE, FIRE SAFETY AND MONITORING SYSTEMS
AND UPS SYSTEM UNDER LAB RENOVATION

TENDER # PUR/APF/2019-20/IND13336



सी डी एफ डी
CDFD

डी एन ए फिंगरप्रिंटिंग एवं निदान केंद्र
Centre for DNA Fingerprinting and Diagnostics
इंनर रिंग रोड, उप्पल, हैदराबाद - 500039
Inner Ring Road, Uppal, HYDERABAD - 500039
(तेलंगाना राज्य) भारत
(Telangana State) India

PRICE BID (PART - II)**अध्याय CHAPTER 4****मूल्य सूची PRICE SCHEDULE (To be quoted in Foreign Currency)**

All the Bidders should quote their offer in the following format for uniformity.

S. No.	Item Description	Qty.	Unit Price	Taxes as applicable	Total Amount
1	Data Center Server Racks integrated with Closed Loop Cooling using Liquid Cooling Package, Fire Safety and Monitoring Systems				
2	63Amps 3 Phase Metered Power Distribution Units with accessories & 3 years warranty				
3	Installation and Commissioning Charges				
4	Miscellaneous				
	Total Amount				

Optional, Quote Compulsory

S.No	Item Description	Qty	Unit price	Taxes As applicable	Total Amount
	Additional Rack upgrade with required PDU, Fire Safety and Monitoring without adding LCP				
1	Additional warranty and support for 4 th year	1			
2	Additional warranty and support for 5 th year				
	Total Amount				

बोलीदाता का हस्ताक्षर
Sign. of Bidder

PRICE BID (PART - II)**मूल्य सूची PRICE SCHEDULE (To be quoted in Foreign Currency)**

All the Bidders should quote their offer in the following format for uniformity.

S.No	Item Description	Qty	Unit price	Taxes As applicable	Total Amount
1	Modular UPS with 4 modules of 20 KVA with N+1 Redundancy in 100/120KVA frame with three years warranty	1			
2	Battery Bank with Racks for 15 minutes backup at full load capacity with accessories with two years warranty	1			
3	Cabling and termination from 80kVA UPS to server racks with earthing	1			
4	Installation and Commissioning Charges	1			
5	Miscellaneous				
	GST				
	Total Amount				

Optional, Quote Compulsory

S.No	Item Description	Qty	Unit price	Taxes As applicable	Total Amount
1	Additional warranty and support for 4 th year	1			
2	Additional warranty and support for 5 th year	1			
	Total Amount				

Other Items If any Please list out

S.No	Item Description	Qty	Unit price	Taxes As applicable	Total Amount
1					
2					
3					
4					
5					
6					

बोलीदाता का हस्ताक्षर
Sign. of Bidder