Pre-bid Clarifications Against Tender No.
IITH/MAE/NISHANTH/2020/T006

Sr. No.	Section No. / Page no.	Cluase/ Para No.	Query	Clarifications
1	Section IV/30 of 96	1 Site Visit	Request you to share the contact details at IITH for coordinating the site visit for assesing the site.	The bidders interested in visiting the site, should mail 48 hours in advance. The details will be shared
2	Section IV	Drawings	Pls share the true floor to true ceiling height along with a sectional view of the server room / UPS room / Battery room	From FFL to Roof Slab Bottom is 3.90Mtrs.
3			Pls indiacte the expected raised floor height from true floor	From FFL to Roof Slab Bottom is 3.90Mtrs
4	Section IV/32 of 96	2.11.2 - UAT	Regarding UAT - The main server racks are liquid cooled types which means at site it is not possible to install rack based heaters for UAT within these high density racks. Pls clarify how this will be addressed. Also heater load banks cannot be installed within the server room for UAT since the liquid cooling system will not be able to dissipate the heat load from the heater load bank and air cooling system is of limited capacity just to cool the server room and 10 % from the liquid cooled racks.	As per Tender conditions
5	Section IV/34 of 96	5.2 - Point load for Raised floor	Point load of 1000 kg is required as per RFP. Raised floor OEM's have informed that max point load of 560 kgs is possible. Request evaluate the exact requirement of point load considering the overall weight of server racks and footprint of server racks.	DLC rack weight is 2200 KG accordingly for point load raised flooring system to be selected
6	Section IV/34 of 96	5.2/5.3/5.4 - Raised floor system	It is observed that very detailed specifications are provided for Panels / stringers / pedestals etc. Raised floor specifications shall be as per OEM specifications while meeting the UDL of 2500 kgs and axail load of 2200 kgs and cemetitious panel, since each OEM will have their own design of panels /pedestals / stringers specifications.	As per Tender
7	Section IV/36 of 96	5.11 - CIVIL	Regarding MS structure work for Installation of Dry coolers/pumps/tanks-- Kindly note that we shall be providing the calculations for supporting the weight of the equipments. However, we assume that structural strength evaluation and if required floor structural strengthening shall be taken care by CDAC	As per Tender
8	Section IV/36 of 96	5.11 - CIVIL	Pls confirm the availibility of project columns at terrace for Tie Bracing of MS platform	As per Tender conditions

JAGADESWARA RAO BALASADI

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Date: 2020.10.07 15:21:21 IST

Sr. No.	Section No. / Page no.	Cluase/ Para No.	Query	Clarifications
9	Section IV/36 of 96	5.12 - CIVIL	Pls clarify floor and ceiling insulation is required for server room only?	Server and UPS Room
10	Section IV/36 of 96	5.8/5.13 - CIVIL	Pls clarify where fire rated wall partition is required and where fire rated glass partition is required	Wall of Battery room will be of Fire rated partation. Wall between Server room and UPS will be with also fire rated partation but with vision window (4 meter length and 2 meter height) fire rated.
11	Section IV/37 of 96	5.17 - CIVIL	NOC room - Pls provide additional details such as location of NOC room, area of NOC room, Type of partitions to be considered for NOC room	As per Tender
12	Section IV/37 of 96	5.17 - CIVIL	NOC room - Pls Clarify whether Chairs / tables are to be supplied by Bidders. If yes, pls provide type / specifications and quantity of workstations with table / chair to be considered.	As per Tender
13	Section IV/37 of 96	5.17 - CIVIL	NOC room - Pls provide details of cooling / UPS for NOC room and whether the same to be provided by Bidders. If IITH is providing, pls share the electrical power consumption.	As per Tender
14	Section IV/37 of 96	5.17 - CIVIL	NOC room - Pls provide additional details such as location of NOC room, area of NOC room, Type of partitions to be considered for NOC room, cooling / UPS for NOC room	As per Tender
15	Section IV/37 of 96	5.17 - CIVIL	Pls clarify scope of supply for NOC room. Whether Monitors along with CPU needs to be supplied by Bidders?If yes, pls provide the specifications for the monitor and CPU	As per Tender conditions
16	Section IV/37 of 96	5.17 - CIVIL	Pls clarify which IBMS packages to be considered for NOC room?	As per Tender
17		CIVIL	Pls let us know the distance up to which the debris needs to be shifted within the campus.	With in the Campus debris disposal not allowed, It should be disposed of at out side the campus only.
18	Section IV	Electricals	Pls clarify whether any existing cables / point wiring to be reused? If yes, request you to share the quantity.	NO
19	Section IV/31 of 96	2.3 - Electricals	Can we submit the Discrimination Curves during the execution phase.	As per Tender
20	Section IV/39 of 96	6.2 - Electricals	What powerfactor need to consider for IT Load & Non IT Load for Battery backup calculation.	For IT load it will be 0.93-0.95 (lag) for NON it load 0.85-0.9 (lag)
21	Section IV/40 of 96	6.3 - Electricals	Is Separate AMF panel is required for 400 kVA DG or the AMF panel can be part of DC Main LT Panel.	As per System Design

Sr. No.	Section No. / Page no.	Cluase/ Para No.	Query	Clarifications
22	Section IV/40 of 96	6.3 - Electricals	There is single no of 400 kVA DG, so Synchronisation is not required in Auto & manual mode.	Noted ,
23	Section IV/41 of 96	6.5 - Electricals	How much Lux level need to maintain Inside DC, UPS Room, Battery Room	As per NBC -450- 500 Lux
24	Section IV/41 of 96	6.5 - Electricals	Near to the DG & adiabatic cooler area Light fixture is required or not, as the same is not indicated in the scope of work.	Required out door illumination in the area of DG set and Dry cooler
25	Section IV/42 of 96	6.7 - Electricals	Is panel feeders / outgoings required Load Manager.	As per SLD
26	Section IV/42 of 96	6.7 - Electricals	Can we select the TVSS response time and Voltage as per the system requirement.	Noted ,
27	Section IV/61 of 96	10 - Electricals	Is DG set is required along with Auto Mains Failure panel or the same can be accomadate in the DC Main LT Panel.	As per System Design
28	SLD	Electricals	Server room PAC, UPS Room PAC & Battery Room Split AC units power supply / feeders are not shown in the SLD, the same need to be consider or not.	Bidder to consider the same in DC LT panel
29	SLD	Electricals	Server room PAC, UPS Room PAC & Battery Room Split AC units power supply / feeders are not shown in the SLD, the same need to be consider or not.	Bidder to consider the same in DC LT panel

Sr. No.	Section No. / Page no.	Cluase/ Para No.	Query	Clarifications
30	SLD	Electricals	125 kVA K4 Isolation transformer can be with fixed circuit without tap changing.	With Tap Changing leads
31	Section IV/42 of 96	7.1 - HVAC -Dry cooler	It is observed that the Detailed specifications of adiabatic dry cooler is provided. Since each of the approved OEM will have slightly varying design specifications, request you to accept the approved OEM specifications subject to meeting operating parameters of 200 kW Cooling Capacity / Leaving water temperature of 33 Deg C and Delta of 16 deg C	Noted ,
32	Section IV/General	7.1 - HVAC -Dry cooler	Adiabatic dry cooler requires make up water to ensure for effective working. Pls provide the present site water quality report which will help us to design the water treatment system if required.	Bidder to collect the water sample and accordingly water treatment system to be designed
33	Section IV/42 of 96	7.1.1 - HVAC -Dry cooler	In place of VFD fans, some OEM's are offering EC fans. Request you to approve both VFD as well as EC fans.	Individual VFD for indicidual fan will be accpeted
34	Section IV/43 of 96	7.1.1 - HVAC -Dry cooler	Regarding Spray water distribution with pumps - Some of the OEM's are offering gravity based spray system. Kindly approve either pumped or gravity based system spray as per approved OEM's design for spraying the water.	Pump Based
35	Section IV/44 of 96	7.1.3 - HVAC - Piping	Pls clarify whether Insulation is required with 25 mm thick insulation since the circulating fluid temperature is 33 deg C and 49 deg C.	PAC air will come in contact with the DRY cooler piping . Insulation is required to avoid the additional heat load on PAC.
36	Section IV/45 of 96	7.1.6 - HVAC - Pumps	Regarding Horizontal centrifugal monoblock pumps. Pls allow to use vertical inline as well as Horizontal Monoblock pumps.	Noted ,
37	Section IV/35 of 91	7.2 - PAC	Please accept R-407C refrigerant alongwith R-410A. Both refrigerant are belong to HFC group which are eco-friendly	yes

Sr. No.	Section No. / Page no.	Cluase/ Para No.	Query	Clarifications
38	Section IV/35 of 91	7.2 - PAC	Evaporator fans arrangement will be draw through for proper air distribution across the coil and hence kindly allow us to use Draw thru arrangement.	As per manufacturers standard practice .
39	Section IV/35 of 91	7.2.10/19 - PAC	Each Double circuit indoor PAC unit will have a dedicated double circuit type condenser enclosed in single frame which has benefit on the outdoor space requirement.	Noted ,
40	Section IV/35 of 91	7.2.11 - PAC	As per OEM manufacturing standard, PAC unit shall have double skin side panels with 15mm PU sheet insulation which has better thermal & acoustic properties.	As per manufacturers standard practice .
41	Section IV/35 of 91	7.2.13 - PAC	Filters are cleanable type instead of disposable type.	As per manufacturers standard practice .
42	Section IV/35 of 91	7.2.15 - PAC	Compressors are placed inside the indoor unit which is double skin construction hence acoustic hood is not required. Kindly confirm.	As per manufacturers standard practice .
43	Section IV/35 of 91	7.2.17.12 - PAC	Each unit will have common evaporator with 2 independent circuits for each of the compressors. Kindly allow.	Noted ,
44	Section IV/35 of 91	7.2.19 - PAC	The condenser fan speed will be max 1400 RPM	Noted ,
45	Section IV/35 of 91	7.2 - PAC	Kindly allow R407c refrigerant along with R410a as both are enviromental friendly refrigerants.	Yes
46	Section IV/35 of 92	7.2.22 - PAC	De humidification will be achieved using electronic expansion valve by keeping fan speed constant to ensure proper air distribution across all the racks and to avoid any hot spot by varing fan speed. Kindly Allow.	As per manufacturers standard practice .
47	Section IV/35 of 92	7.2.19 - PAC	Air cooled condenser coil configuration shall be as per manufacturer standard meeting the heat rejection requirement for offered PAC.	As per manufacturers standard practice .
48	Section IV/35 of 92	7.2.24 - PAC	As per OEM design, Speed of condensation fans will not be available on unit display. However, unit will be controlling the required condensing temperature as per the ambient temperature variation.	As per manufacturers standard practice .
49	Section IV/41 of 91	7.6 - HVAC	Butterfly valves pressure rating is indicated as 16.5 KSC where as check valves pressure rating is indicated as 10.5 KSC. Kindly clarify whether we should design the system with PN10 rated valves OR PN 16 rated valves.	PN10
50	P&I	HVAC	Pls clarify what accessories / valves are required at the inlet and outlet connection of the Liquid cooled racks. (such as specifications of the ball valves / y strainers / balancing valve etc)	As Per P & ID and tender specification

Sr. No.	Section No. / Page no.	Cluase/ Para No.	Query	Clarifications
51	P&I	HVAC	Pls clarify the type of piping connection compatible to the liquid cooled racks. (MS pipe or Flexible pipe)	As per P & ID and given as flexiable hose
52	P&I	HVAC	Pls clarify what is the maximum hydraulic pressure that the Liquid cooled racks can withstand. This is required to correctly position the pumps and also to limi the hydraulic pressure testing of the pipe line post completion of the works.	Differential pressure 35 KPA and supply line of 3--4 KG
53	P&I	HVAC	Pls clarify the required temperature tolerance for cooling water from Adiabatic Dry Cooler.	33 Deg C max supply will be required
54	P&I	HVAC	pls clarify what type of flow control arrangement is provided for the liquid cooled racks such as 2 way modulating control valve or 3 way modulating control valve	2 Way
55	P&I	HVAC	In case of a 2 way control valve, pls clarify what is the minimum water flow rate allowed.	Minimum is zero
56	Section IV/62 of 96	4.3 - IBMS (CCTV)	Please clarify or confirm on requirement of 16 channel NVR system and required client PC (RFP specification) with 24TB storage or more to hold storgae for 4 month	YES
57	General	IBMS	Pls provide the location along with distance of BMS room and also clarify whether new BMS room to be created or existing BMS room to be used.	BMS room will be same UPS room
58	Page 10, Section I, Clause 6	The firm registered with NSIC/MSME as manufacturer for supply of the offered product for which the firm is submitting quotation shall only be exempted from submission of EMD. Intended parties must give proof of registration and manufacturer along with their quotation	We are an Elite Partner for Schneider Electric (who is the Manufacturer / OEM). Can our MSME certificate be eligible for claiming exemption against the above clause.	As per Tender

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59	Section IV	Drawings	Pls indiacte the expected raised floor height from true floor	450-550 mm
60	Section IV/32 of 96	2.11.2 - UAT	Regarding UAT - The main server racks are liquid cooled types which means at site it is not possible to install rack based heaters for UAT within these high density racks. Pls clarify how this will be addressed. Also heater load banks cannot be installed within the server room for UAT since the liquid cooling system will not be able to dissipate the heat load from the heater load bank and air cooling system is of limited capacity just to cool the server room and 10 % from the liquid cooled racks.	Heater load bank is not required
61	Section IV/34 of 96	5.2 - Point load for Raised floor	Point load of 1000 kg is required as per RFP. Raised floor OEM's have informed that max point load of 560 kgs is possible. Request evaluate the exact requirement of point load considering the overall weight of server racks and footprint of server racks.	DLC rack weight is 2200 KG accordingly for point load raised flooring system to be selected
62	Section IV/34 of 96	5.2/5.3/5.4 - Raised floor system	It is observed that very detailed specifications are provided for Panels / stringers / pedestals etc. Raised floor specifications shall be as per OEM specifications while meeting the UDL of 2500 kgs and axail load of 2200 kgs and cemetitious panel, since each OEM will have their own design of panels /pedestals / stringers specifications.	Noted ,
63	Section IV/36 of 96	5.11 - CIVIL	Regarding MS structure work for Installation of Dry coolers/pumps/tanks-- Kindly note that we shall be providing the calculations for supporting the weight of the equipments. However, we assume that structural strength evaluation and if required floor structural strengthening shall be taken care by CDAC	Yes to be taken care by IIT Hyderabad
64	Section IV/36 of 96	5.11 - CIVIL	Pls confirm the availibility of project columns at terrace for Tie Bracing of MS platform	Yes
65	Section IV/36 of 96	5.12 - CIVIL	Pls clarify floor and ceiling insulation is required for server room only?	Server and UPS Room
66	Section IV/36 of 96	5.8/5.13 - CIVIL	Pls clarify where fire rated wall partition is required and where fire rated glass partition is required	Wall of Battery room will be of Faire rated partation. Wall between Server room and UPS will be with also fire rate partation but with vision window (4 meter length and 2 meter height) fire rated.
67	Section IV/37 of 96	5.17 - CIVIL	NOC room - Pls provide additional details such as location of NOC room, area of NOC room, Type of partitions to be considered for NOC room	As per Tender

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68	Section IV/37 of 96	5.17 - CIVIL	NOC room - Pls Clarify whether Chairs / tables are to be supplied by Bidders. If yes, pls provide type / specifications and quantity of workstations with table / chair to be considered.	As per Tender
69	Section IV/37 of 96	5.17 - CIVIL	NOC room - Pls provide details of cooling / UPS for NOC room and whether the same to be provided by Bidders. If IITH is providing, pls share the electrical power consumption.	As per Tender
70	Section IV/37 of 96	5.17 - CIVIL	NOC room - Pls provide additional details such as location of NOC room, area of NOC room, Type of partitions to be considered for NOC room, cooling / UPS for NOC room	As per Tender
71	Section IV/37 of 96	5.17 - CIVIL	Pls clarify scope of supply for NOC room. Whether Monitors along with CPU needs to be supplied by Bidders?If yes, pls provide the specifications for the monitor and CPU	As per Tender
72	Section IV/37 of 96	5.17 - CIVIL	Pls clarify which IBMS packages to be considered for NOC room?	As per Tender
73	Section IV	Electricals	Pls clarify whether any existing cables / point wiring to be reused? If yes, request you to share the quantity.	NO
74	Section IV / 31 of 96	2.3 - Electricals	Can we submit the Discrimination Curves during the execution phase.	As per Tender
75	Section IV / 39 of 96	6.2 - Electricals	What powerfactor need to consider for IT Load & Non IT Load for Battery backup calculation.	For IT load it will be 0.93-0.95 (lag) for NON IT - 0.85-0.9 (lag)
76	Section IV / 40 of 96	6.3 - Electricals	Is Separate AMF panel is required for 400 kVA DG or the AMF panel can be part of DC Main LT Panel.	As per System Design
77	Section IV / 40 of 96	6.3 - Electricals	There is single no of 400 kVA DG, so Synchronisation is not required in Auto & manual mode.	Noted ,
78	Section IV / 41 of 96	6.5 - Electricals	How much Lux level need to maintain Inside DC, UPS Room, Battery Room	As per NBC -450- 500 Lux
79	Section IV / 41 of 96	6.5 - Electricals	Near to the DG & adiabatic cooler area Light fixture is required or not, as the same is not indicated in the scope of work.	Required out door illumination in the area of DG set and Dry cooler
80	Section IV / 42 of 96	6.7 - Electricals	Is panel feeders / outgoings required Load Manager.	As per SLD
81	Section IV / 42 of 96	6.7 - Electricals	Can we select the TVSS response time and Voltage as per the system requirement.	Noted ,
82	Section IV / 61 of 96	10 - Electricals	Is DG set is required along with Auto Mains Failure panel or the same can be accomadate in the DC Main LT Panel.	As per System Design

Sr. No.	Section No. / Page no.	Cluase/ Para No.	Query	Clarifications
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86	Section IV/42 of 96	7.1 - HVAC -Dry cooler	It is observed that the Detailed specifications of adiabatic dry cooler is provided. Since each of the approved OEM will have slightly varying design specifications, request you to accept the approved OEM specifications subject to meeting operating parameters of 200 kW Cooling Capacity / Leaving water temperature of 33 Deg C and Delta of 16 deg C	Noted ,
87	Section IV/General	7.1 - HVAC -Dry cooler	Adiabatic dry cooler requires make up water to ensure for effective working. Pls provide the present site water quality report which will help us to design the water treatment system if required.	Bidder to collect the water sample and accordingly water treatment system to be designed
88	Section IV/42 of 96	7.1.1 - HVAC -Dry cooler	In place of VFD fans, some OEM's are offering EC fans. Request you to approve both VFD as well as EC fans.	Individual VFD for indicidual fan will be accpeted
89	Section IV/42/43 of 96	7.1.1 - HVAC -Dry cooler	Regarding Spray water distribution with pumps - Some of the OEM's are offering gravity based spray system. Kindly approve either pumped or gravity based system spray as per approved OEM's design for spraying the water.	Pump Based
90	Section IV/44 of 96	7.1.3 - HVAC -Piping	Pls clarify whether Insulation is required with 25 mm thick insulation since the circulating fluid temperature is 33 deg C and 49 deg C.	PAC air will come in contact with the DRY coole rpiping . Insulation is required to avoid the additional heat load.
91	Section IV/45 of 96	7.1.6 - HVAC -Pumps	Regarding Horizontal centrifugal monoblock pumps. Pls allow to use vertical inline as well as Horizontal Monoblock pumps.	Noted ,
92	Section IV/35 of 91	7.2 - PAC	Please accept R-407C refrigerant alongwith R-410A. Both refrigerant are belong to HFC group which are eco-friendly	yes
93	Section IV/35 of 91	7.2 - PAC	Evaporator fans arrangement will be draw through for proper air distribution across the coil and hence kindly allow us to use Draw thru arrangement.	As per manufacturers standard practice .
94	Section IV/35 of 91	7.2.10/19 - PAC	Each Double circuit indoor PAC unit will have a dedicated double circuit type condenser enclosed in single frame which has benefit on the outdoor space requirement.	Noted ,

Sr. No.	Section No. / Page no.	Cluase/ Para No.	Query	Clarifications
95	Section IV/35 of 91	7.2.11 - PAC	As per OEM manufacturing standard, PAC unit shall have double skin side panels with 15mm PU sheet insulation which has better thermal & acoustic properties.	As per manufacturers standard practice .
96	Section IV/35 of 91	7.2.13 - PAC	Filters are cleanable type instead of disposable type.	As per manufacturers standard practice .
97	Section IV/35 of 91	7.2.15 - PAC	Compressors are placed inside the indoor unit which is double skin construction hence acoustic hood is not required. Kindly confirm.	As per manufacturers standard practice .
98	Section IV/35 of 91	7.2.17.12 - PAC	Each unit will have common evaporator with 2 independent circuits for each of the compressors. Kindly allow.	Noted ,
99	Section IV/35 of 91	7.2.19 - PAC	The condenser fan speed will be max 1400 RPM	Noted ,
100	Section IV/35 of 91	7.2 - PAC	Kindly allow R407c refrigerant along with R410a as both are enviromental friendly refrigerants.	Yes
101	Section IV/35 of 92	7.2.22 - PAC	De humidification will be achieved using electronic expansion valve by keeping fan speed constant to ensure proper air distribution across all the racks and to avoid any hot spot by varing fan speed. Kindly Allow.	As per manufacturers standard practice .
102	Section IV/35 of 92	7.2.19 - PAC	Air cooled condenser coil configuration shall be as per manufacturer standard meeting the heat rejection requirement for offered PAC.	As per manufacturers standard practice .
103	Section IV/35 of 92	7.2.24 - PAC	As per OEM design, Speed of condensation fans will not be available on unit display. However, unit will be controlling the required condensing temperature as per the ambient temperature variation.	As per manufacturers standard practice .
104	Section IV/41 of 91	7.6 - HVAC	Butterfly valves pressure rating is indicated as 16.5 KSC where as check valves pressure rating is indicated as 10.5 KSC. Kindly clarify whether we should design the system with PN10 rated valves OR PN 16 rated valves.	PN10
105	P & I	HVAC	Pls clarify what accessories / valves are required at the inlet and outlet connection of the Liquid cooled racks. (such as specifications of the ball valves / y strainers / balancing valve etc)	As Per P & ID and tender specification
106	P & I	HVAC	Pls clarify the type of piping connection compatible to the liquid cooled racks. (MS pipe or Flexible pipe)	As per P & ID and given as flexiable hose
107	P & I	HVAC	Pls clarify what is the maximum hydraulic pressure that the Liquid cooled racks can withstand. This is required to correctly position the pumps and also to limi the hydraulic pressure testing of the pipe line post completion of the works.	Differential pressure 35 KPA and supply line of 3--4 KG
108	P & I	HVAC	Pls clarify the required temperature tolerance for cooling water from Adiabatic Dry Cooler.	33 Deg C max supply will be required

Sr. No.	Section No. / Page no.	Cluase/ Para No.	Query	Clarifications
109	P & I	HVAC	pls clarify what type of flow control arrangement is provided for the liquid cooled racks such as 2 way modulating control valve or 3 way modulating control valve	2 Way
110	P & I	HVAC	In case of a 2 way control valve, pls clarify what is the minimum water flow rate allowed.	Minimum is zero
111	Section IV/62 of 96	4.3 - IBMS (CCTV)	Please clarify or confirm on requirement of 16 channel NVR system and required client PC (RFP specification) with 24TB storage or more to hold storgae for 4 month	YES
112	General	IBMS	Pls provide the location of BMS room and also clarify whether new BMS room to be created or existing BMS room to be used.	BMS room will be same UPS room
113	Page 53 - 7.11 - Requirements towards Heating, ventilation, and air conditioning (HVAC) work	Server Rack 42U having dimensions of 800 X 1200 mm. The Rack unit supported by Plinth/ Casters/ Leveller should support a static load not less than 1,000 kg, total installed equipment weight. Sound-proof blanking plates should be placed in empty 25% blank plates to be provided. Rack should conform to DIN 41494 Standard, all enclosure components i.e. frame and door should be bonded together and to rack ground point. Rack is powder coated with Nano ceramic pre-treatment process using a zirconium coat. The Powder coating process is ROHS compliant. Powder coating thickness shall be 80 to 100 microns. The bidder is required to do the NSM Branding on the front door and side panel of racks as per the specification. Bidder to consider supply and installation of two racks as per above specifications and also consider branding for another 3 RACK's . i.e The Branding needs to be considered for total 5 Racks. .	It is recommended to add process certificates Complying to ISO 9001, 14001, 45001 & UL . This helps to meet the product to be of international standards and certifications. It is also required to clarify on the Branding art work etc for the exising racks	As per Tender conditions

Sr. No.	Section No. / Page no.	Cluase/ Para No.	Query	Clarifications
114	Page 61 - Below is the list of minimum components/systems (BOQ) bidder should consider in the offering.	Supply, Installation, Testing and Commissioning of Rack PDUs , 2 nos. each in Service Rack and Storage Rack of 32 Amps 3 Phase with 20 nos. C 13 and 6 nos. of C19 sockets per PDU.	PDU with 32 Amps load is always single phase with maximum load of 7.3 KVA . It is required to specify if 3P PDU is required and the actual current load per PDU. Also ideal scenario is to distribute the sockets into 2 circuits (10 of C13 & 3 of C19) . Also specify the plug top size required or supply to be made with free ended cable.	As per tender requirment PDU is 3 phase 32 Amps 3P+N+E , neutral should ne 100 % rated with 20 Nos C-13 Sockts and 6 nos C-19 sockets. Refer SLD for plug and socket requirment.
115	Section IV, Page no. 42 - 53	Requirements towards Heating, ventilation, and air conditioning (HVAC) work	It is recommended to add process certificates Complying to ISO 9001, 14001, 45001 & UL . This helps to meet the product to be of international standards and certifications. It is also required to clarify on the Branding art work etc for the exising racks	Noted
116	Page 61, Section IV, Para 10, Point 2 (3.0)	Electrical Sytem: Supply, Installation, Testing and Commissioning of Rack PDUs , 2 nos. each in Service Rack and Storage Rack of 32 Amps 3 Phase with 20 nos. C 13 and 6 nos. of C19 sockets per PDU.	PDU with 32 Amps load is always single phase with maximum load of 7.3 KVA . It is required to specify if 3P PDU is required and the actual current load per PDU. Also ideal scenario is to distribute the sockets into 2 circuits (10 of C13 & 3 of C19) . Also specify the plug top size required or supply to be made with free ended cable.	As per tender requirment PDU is 3 phase 32 Amps 3P+N+E , neutral should ne 100 % rated with 20 Nos C-13 Sockts and 6 nos C-19 sockets. Refer SLD for plug and socket requirment.
117	Section III - Special Conditions of Contract; Clause 7; Page no. 23	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 supplier further warrants that all Goods supplied under this contract shall have no defect arising from design, materials or workmanship (except when the design and/or material is required by the Purchaser's specifications) or from any act or omission of the supplier. The warranty should be comprehensive on site, repair/replacement basis free of cost. All the equipment and components supplied must have three years onsite comprehensive warranty from date of successful installation, commissioning and signing of ISAT.	Bidder seeks clarity on the list of items on which this warranty is to be applied	

Sr. No.	Section No. / Page no.	Cluase/ Para No.	Query	Clarifications
118	Section III - Special Conditions of Contract; Clause 8; Page no. 24	Post Warranty AMC: The bidder should quote for post warranty AMC services towards the integrated datacenter solution/sub-systems supplied and installed at various locations in India. The AMC charges should be for 4th year and 5th year from the date of successful installation and ISAT of datacenter solution at respective locations. The AMC charges per year should be quoted as per price format given in Section VI of this document and must not be more than 10% of the cost of the items supplied	Bidder seeks clarity on the list of items on which this warranty is to be applied	
119	Section IV – Schedule of Requirement Schedule of Requirement; Clause 2.11.1; Page 31	Factory Test Reports	Our understanding is that we have to provide routine factory test reports for the listed products during supply. There will not be any factory inspection & testing by either IIT, CDAC, MHRD officials, Nominated Consultant or 3rd party testing agencies	If required we can do the FAT at manufacturer location.
120	Section III - Clause 10		Bidder seeks to get clarified on the guidelines / process / protocol to be followed by the contractor, during executions, as a precautionary measure to prevent spread of Covid pandemic	Covered under Point no. 10, Force Majeure
121		New/Request	Variation/ Change Order not mentioned: Kindly share the maximum variation permitted and procedure for carrying out the change order in case of any item qty variations	As per Tender conditions
122		New/Request	Insurance: Bidder seeks to clarity as to who will cover the erection & commissioning all risk and what all insurances are in bidders scope	As per Tender conditions
123	Page no. 92, Annexure I, Clause no. 1	Operations & Maintenenace	Bidder requests client to detail scope & guideliens of Operations and Maintenance under this tender contract. The scope should cover number of manpower, no of shifts required, type of reports, SLA coverage etc.	Scope is as per tender , Annexure,service level agreement etc. Bidder to descide the no of manpower required to mainthain the UP time of data center.
124				

Sr. No.	Section No. / Page no.	Cluase/ Para No.	Query	Clarifications
125	Section IV Page No: 33-34	Requirements towards Civil 5.5 Raised Flooring	The entire Access floor system shall be made from high density Calcium sulphate / cementinous board and provide Class O and Class 1 Fire Ratings tested as per CIRC 91/61 or BS 476 Part 6 & 7 fire resistance up to 60 min as per NFPA.	Cementatious board
126	Section IV Page No:39	Requirements towards electrical work	The UPS connecting to NON IT Load Specification not provided. Request to please provide the specification	Refer Corrigendum
127	Page No. 77	Intelligent Fire detection system Make:-	Honeywell[Notifier] Notifier is fire panel model is Model request you to change to only Honeywell	Noted
128	Page 42 - 6.8	Cable tray - For Gray Speace	Wire mesh Cable tray - Hot Dipped Galavanised can be used?	Noted
129		Cable tray - for White space	Wire mesh cable tray - Stainless Steel 304L or 316L clarify?	304 L
130	Page 61 - 2.7	Supply, Installation, Testing and Commissioning of perforated type Cable Trays along with Cover and supporting hangers as per Standard Engineering Practice	Wire mesh cable tray with Cover can be use	Perforated cable trays
131	Page 63 (7)	IS 8623 Factory built assemblies of switchgear, and control gear for voltages up to and 660 V	IS 8623 : Part 1 : 1993 (Reaffirmed Year : 2013) Low-Voltage Switchgear and Controlgear Assemblies - Part 1 : Requirements for Type-Tested and Partially Type-Tested Assemblies Technical Committee : ETD 7 Superseeded by : IS/IEC 61439-2 : 2011	Noted
132	Page 63 – (8)	IS 2147 Degree of protection provided by enclosure for low voltage switchgear and control	IS 2147 : 1962 Degrees of protection provided by enclosures for low voltage switchgear and controlgear Technical Committee : ETD 17 Superseeded by : IS 13947 : Part 1	Noted
133	Page 63 - (12)	IS 2705 Current transformers	IS 2705 : Part 2 : 1992 (Reaffirmed Year : 2017) Current transformers: Part 2 Measuring current transformers Technical Committee : ETD 34 Superseeded by : IS 16227 (Part 2) : 2016/IEC 61869-2 : 2012	Noted
134	Page 63 - (12)	IS 2705 Current transformers		As per Tender conditions
135	Page 64 (14)	IS 8828 Miniature air break circuit breakers for AC circuit	IS 8828 : 1996 (Reaffirmed Year : 2006) Electrical Accessories - Circuit Breakers for Over Current Protection for Household and Similar Installations Technical Committee : ETD 7 Superseeded by : IS/IEC 60898-1:2002	Noted

Sr. No.	Section No. / Page no.	Cluase/ Para No.	Query	Clarifications
136	Page 64	IS-8623 Factory built assemblies of switchgear and control gear for voltages up to and including 1000V AC and 1200V DC.	IS 8623 : Part 1 : 1993 (Reaffirmed Year : 2013) Low-Voltage Switchgear and Controlgear Assemblies - Part 1 : Requirements for Type-Tested and Partially Type-Tested Assemblies Technical Committee : ETD 7 Superseeded by : IS/IEC 61439-2 : 2011	Noted
137	Page 75, Annexure D	List of Recommended Makes	i)Kindly add Legrand make in Multifunction Meter ii)Kindly add Legrand make Legrand - ACB - MCCB – MCB iii) Kindly add Legrand make in Meters iv) Request to add the make LEGRAND for Cat 6 Cable & OFC Cable	Refer Corrigendum
138	Page 75, Annexure D	List of Recommended Makes	i) List of recommended makes: PAC - Request to add the make STULZ ii) List of recommended makes: CPAHU- Request to add the make STULZ iii) List of recommended makes: Access Control System - OFC Cable - Request to add the make LEGRAND iv) List of recommended makes: Access Control System - CAT6 Cable - Request to add the make LEGRAND v) List of recommended makes:IP CCTV Surveillance System - OFC Cable- Request to add the make LEGRAND vi) List of recommended makes: CAPACITORS - Request to add the make LEGRAND vi) List of recommended makes: Power Distribution Unit (PDU-Inside the Rack) Request to add the make LEGRAND instead of Raritan. Raritan manufactures only the Intelligent PDUs	Refer Corrigendum
139	Page 76	The panels shall be insulated on the inside with minimum 32 Kg/ cum glass wool, for fire insulation class A0.	We will provide mineral wool / rock wool insulation as per OEM design. Request to mention as per OEM Design	As per manufacturer standard practice
140	Page 48	Filtration shall be provided by deep V form G4 performance dry disposable media to AS1324	We will provide HDPE type, washable filter of minimum thickness 40 mm as per OEM design.	As per manufacturer standard practice

Sr. No.	Section No. / Page no.	Cluase/ Para No.	Query	Clarifications
141	Page 50	condenser fan shall be axial type with max 1000 RPM variable voltage electic motor	plesae clarify if Axial fan required in the condenser units should be with Electronically commutated motor type or with Standard AC motor. Condenser fans RPM varies upto a maximum of 1200 RPM	As per manufacturer standard practice
142	Page 51	The microprocessor should be able to display the current drawn and actual steam output in the microprocessor	Request to relax this clause as we do not have this display option. Hope it will not reduce the scope and objective of the project	Noted
143		To be added	Request to add the KVM and Console server There is no mention of IP KVM Switches and Serial Console server for Server Racks and Network Racks respectively. KVM'S and Console servers will help in remote access and remote management of devices thereby avoiding the physical human movement, we recommend these should be in consideration	As per Tender conditions
144	Page 39 – 6.2	To be added	Request to add " output PF UNITY (KVA=KW) " So that ups can deliver more power	Noted
145		To be added	Request to add "Coldstart " UPS is designed to start in battery mode when mains are not available	Noted
146		To be added	Request to add "Pep certificate " Environmantal profile -its GREEN UPS concepts PEPs and are written in compliance with the ISO 14025 standard PEPs summarize a product's life cycle assessment, which examines the environmental impact of a product or product family throughout its lifecycle, from raw material extraction to end of life.	Noted
147		To be added	Request to add " UPS should have its own individual manual built in maintenance bypass " will be useful for maintenance of individual UPS -	Noted

Sr. No.	Section No. / Page no.	Cluase/ Para No.	Query	Clarifications
148		To be added	Service support –OEM Request to mention Direct support from OEM for better field support	Noted
149	Annexure - D /81 of 96	Recommended Make list: Air Handling Unit 2.1. PAC	Request to pl approve flaktgroup PAC.	Refer Corrigendum
150	Annexure - D /80 of 96	Recommended Make list: High side equipment 1.1. Adiabatic Dry cooler.	Request to pl approve matsui adiabatic dry cooler	Refer Corrigendum
151	Page 10, Section I, Clause 6	EMD	EMD - is MSME exemption applicable for any bidder against valid MSME certificate or it is exempted only for manufacturer..	Refer Corrigendum
152			Tender Fee - is it applicable , if yes (for MSME), pl confirm amount.	No Tender Fee
153	Page 53, Section IV, Clause 7.11		We cannot do NSM branding on our racks at the time of supplying as per the end customer requirement. Is this ok.?	As per Tender
154			As for the racks you are asking for the Plinth requirement on the bottom of the rack but we don't have a plinth in our rack its opened. Is this ok?	As per Tender
155			We do not have acoustic sound proof blanking panels, no blanking panel can be 100% soundproof. We have normal plastic blanking panels. Can we go ahead.?	As per Tender
156			Are the racks asked in the tender is with Front glass door or perforated door, need clarification on that part?	As per Tender
157	Page 61, Section IV, Clause 10	Indicative Design	you have given the specification of the rack PDU as 32 Amps 3 Phase with 20 nos. C 13 and 6 nos. of C19 sockets per PDU. But we need to understand are they looking for the basic PDU , metered PDU, monitored PDU or Switched PDU.	Standard PDU
158	Page 47, Section IV, Clause 7.2		For User acceptance testing(UAT),please confirm Total KW rating to be considered for site test.	Site testing will be on actual load as per tender
159			Please confirm if anti corrosive coating is required for ODU as Hyderabad condition does not required this Outdoor coating	As per Tender
160			Can we able to offer Thermostatic expansion valve(TXV) instead of Electronic expansion valve(EEV) which deliver equivalent output with better reliability.	As per Tender
161			Please confirm if Infrared humidifier(IR) is also accepted for PAC.	As per Tender conditions

Sr. No.	Section No. / Page no.	Cluase/ Para No.	Query	Clarifications
162			Please confirm if TOP discharge is considered for UPS PAC and also confirm if humidifier is required for UPS room or not?	Humidifier is required and for air discharge as per user design
163			Warranty of PAC considered?	As per Tender
164	Page 39, Section IV, Clause 6.1		Winding – Copper / Aluminium?	Copper , ASTM B49 - 99.95% purity electrolytic tough pitch grade copper as per IS 13730 Part-29-1996.Polyster amide enamel dual coated rectangular copper wire - class 200
165			K4 or K13 - Which one is specifically required?	K4
166	Chapter I Clause 6	EMD	EMD - Applicability of EMD Exemptions	EMD exemption is allowed only if the firm is registered under the category of Similar Work as per Tender Document with MSME/NSIC.