6. <u>Bill of Quantity</u> (Technical Requirements)

iem No	The state of the s	Compliant Yes / No	Price
	Regular Preventive Maintenance for the following Data Center Equipment and components:	1.00 1110	
1	26 TR PACU Liebert DS Precision cooling, air cooled unit, down blast, parallel redundant setup (2 units)	V	
2	Emerson 120 KVA UPS with 40 external batteries.	Yes	
3	19 Commscope Racks with 38 Altasun Power Distribution Units(PDUs)	tes	
4	Closed-Circuit Television (CCTV) Control System (Model	Yes	
	3 MP, IP CMOS camera (Total ·18 cameras)	Yes	Rs. 50,000)
5	Biometric Access Control System (KiKO Brand) Biometric and Proximity (10 units) including software and 40 " two LCDs.	Yes	KS. 30,000/
6	Raised Floor System	Yes	-
7	HSSD System.	Yes	=
8	Complete Electric System.	Yes	2 3
9	Civil work including, Paint work, Door Paint, NOC Furniture etc.	yes	
	The Service Provider shall read and it. NOC Furniture etc.	Yes	
10	The Service Provider shall render maintenance service from the notification date for the following Equipment and components.	Yes	
1 355	Power Components	Adda Ok dan sana sa a ayar	
			roll reserved by the second se
	1.1 Testing of Circuit breakers and switches.		8
	1.2 performs load balancing to prevent power overload and other	Yes	
	power issue.	Xes	•
	1.2.1 Study the load during the actual operation		
	1.2.2 Determine the unbalance phase load	Yes	
	1.2.3 Monitor the balanced current load	Xey	
	1.2.4 Transfer / reconfigure load to balance the phase load	Xer Yer	
	1.3 Calibration of protective relays.		0.922 1121
	1.4 Perform Megger Testing		2.933,000/.
	1.5 Identification of potential electrical problems	Ves	
	1.6 Survey and identify of high temperature excursions	Yes	
	1.7 Switchgear cleaning and inspection		
	1.8 Cleaning and tightening of all electrical connections and equipment enclosures.	Yes	
	1.9 Replacement of lighting fixture.	Yes	
		Yes	
	1.10 Replacement of defective power outlets and related agree and		
	1.10 Replacement of defective power outlets and related components.1.11 Updating of as-built documentation.	Yes Yes	

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BARACHI

BARACHI

Faisal Iradat

Assistant Protessor

IBA, Karachi

1.12 Checking of electrical connections	Tender # IT	Г/10/19-20
1.12 Checking of electrical connection for all DC components such PACU, UPS, Generator Set, ATS, Fire Suppression System, Accedentally, Video Surveillance and HSSD detector.	ch as	les
Commscope Racks with Altasun Power Distribution: 2 Units(PDUs):		
2.1 Surface cleaning.	P. CORNELS OF SHIPS	
2.2 Check for possible defective of worn out power strips replace in necessary.	if Xa	
2.3 Check for possible defective or worn out accessories such as ax fan and door lock. Replace if necessary	kial Ve	
2.4 Provision for additional cable organizer, hooks, latch straps and pull out shelf.		
2.5 Visual inspection of all parts of data cabinet including panels, door, rack mounting rail, caser, rack connector, cable routing panel and contilever arm.	Yes	R. 209 15
2.6 Ensure the ventilation is sufficient to cope with the heat dissipated by equipment's inside the data cabinet.	1	
2.7 Checking of mounting nuts, adapter, brackets, and multifunction strut. 2.8 Cable harnessing.	1 Yes	
3 Emerson Uninterruptible Power Supply (UPS):	Ve ₃	
3.1 Periodic monthly maintenance services for the UPS unit and battery system to be performed on a mutually agreed schedule. 3.2 All the necessary spare parts or several large entering the services are parts or several large.	Xes	The state of the s
3.2 All the necessary spare parts or consumable items to maintain the US must be allotted from stock inventory.	Yhen	
3.3 Conduct on-site inspection of the equipment and check the integrity of any electrified hinges or similar power-transfer devices.3.4 Replace batteries as necessary.	Yes	0 1.21.521
3.5 Check current UPS installation condition. Installation should be in accordance with the manufacturer's guideline and wiring regulations.	Yes	Ps 1094,1537
3.6 Perform appropriate preventive measures to keep the UPS in good and running condition and ensure that ventilation is capable of maintaining the DC within recommended ambient temperature and humidity.	Xay Xay	
3.7 Perform power failure simulation to check charging and discharging capacity of battery.	رولا	

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4.	4 Emerson Precision Air Conditioning Unit (PACU):	Tender # IT/	10/19-20
	4.1 inspection and regular preventive maintenance of PACU units and ensure that it is working on optimum level.		
	4.2 Check and roule	Yen	
	4.2 Check and replace worn-out parts including filters, fan belts and other consumable components.	d	Per 1430950
	5 Raised Floor Systematics	Yes	1 2,130,131
	S Raised Floor System:		
	5.1 Solid and perforated panel rotation for even wear		
	and budding admissments	Yes	
1	5.3 Replacement of warped panels	Yes	
ľ	5.4 Refurbish delaminated panels	Yes	4
.	5.5 Sub-micron filter vacuuming	Yes	Pr 229 00
-	3.6 Sealant applied to sub-flooring	Yes	Ps 229,000/
-	3.7 Spot cleaning to remove stains	Yes	
-	5.9 Professional surface cleaning	Yes	
2	3.10 Detail cleaning of entry points	Yes	
	Samsung Brand Surveillance Syst	Yes	
	6.1 Check cameras in accordance with the specification and any amendment.	100	The state of the s
-	amendment.		TO CHEST PURPOSE LEGISLATION OF THE PERSON O
	6.2 Check indicator lamps condition.	Ker	
	6.3 Check all cables and and it	Ye	
	6.3 Check all cables and conduit are properly supported undamaged and showing no signs of wear.		
	6.4 check the picture 114 and 154 and	Yes	
	6.4 check the picture quality of each camera and correct monitor selection.		
	6.5 Cleaning of compare's 1	Yes	=
	6.5 Cleaning of camera's housings and lenses.	Yes	
	6.6 check camera functions and movement and fields of view are free obstruction.	79	
		Yes	B. 257 890/-
	6.7 Check camera functions and movement and fields of view are free form obstruction	139	
		Yes	
	6.8 Check if the NVR and DVR are recording properly.		
	o.s check the status of the storage if it reaches the	Yes	
		~	
	6.10 Check communication and recording of all IP cameras with the NVR.	Yas	
	NVR. NVR.	Yay .	8
		14)	
	6.11 Check all control equipment's are up and running condition.	Yes	
	o.12 provision of spares of IP-based surveillance	19	74
	installed model.	Yes	ε.
		1-3	21 11

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at a south and	Keico Brand Access Control System.	Tender # IT/10/19-20
	software.	+
*	1/2 Cleaning and	Yey lo 15.
24	7.5 Maintenance of Push-to-exit buttons	X4 (A. 151,
8	Date Center Carry	Yes
	8.1 Complete Paint work of all Data Center area Including Doors. 8.2 Repair and maintenance of NOC Furniture	Typ 1
9	Resident R.	16 ts.7
in the state of th	Data Center RE's should be responsible for monitoring of all Server Room hardware equipment. Operate, monitor, maintain, and respond to abnormal conditions in facilities systems. Areas include: Electrical, Mechanical and Building Monitoring and Control. Should have a good understanding of all technicalities. It will be help in identifying the errors and also monitoring the occurrences related to Maintain a record to keep track of all the events and logs to facilitate in the interior in the superiors. Ability to communicate intelligently and effectively with contractors the perform maintenance or upgrade work on these systems. The interior is a communicate intelligently and effectively with contractors are in quickly and address issues as they arise during normal working in the logical part of the performance of the inclusion of	ful Yes 2,909

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-	K	5.7,999, 184
	Rs.	1,039, 8991
	Rs.	9039.078
	111:	Rs.

Grand Total Amount Rupees (in words) Nine Million Thirty Nine
Thousand and Seventy Eight Rupees only (Inclusive of CE)

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DR. S. M Fay Sal Iradat Alsistant Professor IRAJ Karachy