



SBI INFRA MANAGEMENT SOLUTIONS PVT.LTD.

STATE BANK OF INDIA.

LOCAL HEAD OFFICE, 3rd FLOOR, C-6,G- BLOCK,
SYNERGY BUILDING, BANDRA-KURLA COMPLEX,
BANDRA (EAST), MUMBAI-400 051

TENDER ID: MUM201904012

TENDER FOR SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF 2 NOS.100KVA (PARALLEL REDUNDANCY) & 1 NO OF 20 KVA UPS SYSTEMS WITH BATTERIES FOR SBI, LHO, BKC, BANDRA(E), MUMBAI.

PART – A: TECHNICAL BID

TENDER SUBMITTED BY: :

ADDRESS :

DATE :



TENDER NOTICE

To,

Dear Sir,

NAME OF WORK: TENDER FOR SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF 2 NOS.100KVA (PARALLEL REDUNDANCY) & 1 NO OF 20 KVA UPS SYSTEMS WITH BATTERIES FOR STATE BANK OF INDIA, LOCAL HEAD OFFICE, BANDRA-KURLA COMPLEX, BANDRA (E), MUMBAI.

On line tenders on prescribed Bill of Quantity are invited by the circle office of SBIIMS Pvt. Ltd. on behalf of SBI for the above work **from the OEMS (Make: NUMERIC, ERAM MAGNAFLUX, TECHSER, Hitachi Hi-Rel Power, TRITONICS)**. The details are as under: -

1	Name of the Work	TENDER FOR SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF 2 NOS.100KVA (PARALLEL REDUNDANCY) & 1 NO OF 20 KVA UPS SYSTEMS WITH BATTERIES AT 'SYNERGY', SBI, LHO, BKC, MUMBAI.
2	Nature of Work	TENDER FOR SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF 2 NOS.100KVA (PARALLEL REDUNDANCY) & 1 NO OF 20 KVA UPS SYSTEMS WITH BATTERIES AT 'SYNERGY', SBI, LHO, BKC, MUMBAI.
3	Cost of tender	Rs. 5000/- (Rs. Five Thousand Only) to be paid through State Bank Collect ONLY as detailed under; 1) login https://www.onlinesbi.com 2) Select SB Collect from Top Menu, click the check box and "Proceed" 3) Select "All India" in "State of Corporate/Institution" & Select "Commercial Services" in "Type of Corporate/Institution" then "Go" 4) Select "SBI Infra Management Solutions Pvt. Ltd" in Commercial Services Name and "Submit" 5) Select "Tender Application Fee" in "Payment Category" and enter the "Tender ID" exactly as given in first page top of this tender(characters in uppercase Only). 6) Fill up all fields such as email, GST No., Mobile No, Vendor/Firm Name etc and make payment. 7) Enclose payment receipt having unique reference No. along with EMD.
4	Earnest Money Deposit	Rs. 32,000/- (Rs. Thirty TWO Thousand only) by means of Demand Draft / Pay Order from any scheduled Nationalized Bank drawn in favour of SBI Infra Management Solutions Pvt. Ltd. and payable in Mumbai.
5	Date of issue of tender documents (Technical Bid &	25.04.2019 to 13.05.2019



	Indicative Price Bid) form Bank's website. www.sbi.co.in under procurement news	
6	Bid submission place	Vice President & Circle Head, SBI Infra Management Solutions Pvt. Ltd. SBI, Local Head Office,3rd floor,C-6,G-Block Synergy Building, Bandra- Kurla Complex, Bandra (East), Mumbai-400 051
7	Last date & time for submission of Technical bid along with EMD	13.05.2019 at 3.00 p.m.
8	Address at which the EMD & Technical bid (hard copy) has to be submitted.	Vice President & Circle Head, SBI Infra Management Solutions Pvt. Ltd. SBI, Local Head Office,3rd floor,C-6,G-Block Synergy Building, Bandra- Kurla Complex, Bandra (East), Mumbai-400 051
9	Last date & time for submission of online price bid.	ON 15.05.2019 up to 3 PM (Available for up loading from 22.04.2018 to 23.04.2018)
10	Last date & time of online opening of price bid through e-tendering.	15.05.2019 at 3.30 p.m. At: - https://sbi.abcpurchase.com/
11	Validity of the offer	90 days from opening.
12	Initial Security Deposit	2 % of the Value of work including EMD
13	Eligibility Criteria	Average annual financial turnover during the last 3 years, ending 31 st March of the previous financial year, should be at least Rs. 9,60,000.00 (Rupees Nine Lacs sixty thousand Only) The bidder should submit the balance sheet for last 3 years. ii) Experience of having successfully completed works during last 5 years ending 31.03.2019 should be either of the following: - a. Three similar completed works costing not less than the amount equal to Rs. 12,80,000.00 (Rupees Twelve Lacs Eighty Thousand Only) or b. Two similar completed works costing not less than the amount equal to Rs. 16,00,000.00 (Rupees Sixteen Lacs Only) or c. One similar completed work costing not less than the amount equal to Rs. 25,60,000.00 (Rupees Twenty five Lacs sixty thousand Only) iv) The Contractor should submit the list of empanelment with Govt. /Semi. Govt/ PSU/ RBI/institutions.



		<p>v) Satisfactory Performance Certificate of completed similar projects during last five years from client/organizations along with TDS certificate.</p> <p>vi) The vendor shall comply with GST, PF, ESIC, IT, PAN & Safety Norms.</p> <p>vii) The bidders should have office in Mumbai, Navi Mumbai or Thane</p> <p>viii) Firms who fulfill the above criteria supported with following documentary proof shall only considered for participation:</p> <p>I) List of similar works carried out by them for the last five years indicating the organisation for whom executed,</p> <p>II) Value of work, completion time (stipulated & actual)</p> <p>III) List of similar works in hand indicating the organisation for whom executed, value of work, completion time (stipulated & actual status of work)</p>
14	Value of Interim Certificate	No advance on materials / plant / machinery or mobilization advance shall be paid under any circumstances
15	Liquidated Damages	0.50% of contract amount per weeks subject to max. 5% of contract value or final bill value.
16	Validity of offer	90 days from the date of opening of Price-bid
17	Defects liability period	12 Months from the date of Virtual Completion
18	Pre Bid Meeting	06.05.2019 at Synergy LHO Mumbai.
19	Comprehensive Annual Maintenance Contract	5 Year comprehensive (all in all) AMC after completion of 1 year defect liability period
20	Time allowed for completion of the Works from fourteenth day after the date of written order or date of handing over of the site (whichever is later) to commence the work	10 Week

Contractors are advised to quote on line on the site <https://sbi.abcprocure.com/> their price bid by the stipulated time & date.

In case the date of opening of tenders is declared as a holiday, the tenders will be opened on the next working day at the same time.

Payments towards the above work shall be made by SBI.

SBIIMS on behalf of SBI has the right to accept / reject any or all tenders without assigning any reasons.

Yours faithfully,



**VICE PRESIDENT & CIRCLE HEAD,
SBI INFRA MANAGEMENT SOLUTION PVT.LTD.,
CIRCLE OFFICE, MUMBAI**

FORM TENDER

To,
Vice President & Circle Head,
SBI Infra Management Solutions Pvt. Ltd.
SBI, Local Head Office,3rd floor,C-6,G-Block
Synergy Building,
Bandra- Kurla Complex, Bandra (East),
Mumbai-400 051.

Dear Sir,

Having examined the scope of work and schedule of quantities relating to the works specified in the memorandum hereinafter set out and having visited and examined the site of the works specified in the said memorandum and having acquired the requisite information relating thereto as affecting the tender, I/We hereby offer to execute the works specified in the said memorandum at the amount mentioned in the attached Schedule of Quantities and in accordance in all respects with the scope of work and instructions in writing referred to in conditions of tender, the Articles of Agreement, Special Conditions, Schedule of Quantities and Conditions of Contract and with such materials as are provided for by, and in all other respects in accordance with such conditions so far as they may be applicable.

MEMORANDUM

E-TENDER FOR SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF 2 NOS.100KVA (PARALLEL REDUNDANCY) & 1 NO OF 20 KVA UPS SYSTEMS WITH BATTERIES FOR SYNERGY LHO MUMBAI Earnest Money : Rs -----Rupees -----

-----Only

Security Deposit : 5% of the annual contract value including EMD

1) I / We have deposited a sum of Rs -----/- (Rupees ----- only) of the total tender amount as Earnest Money with the SBI Infra Management Solutions Pvt. Ltd. on behalf of SBI which amount is not to bear any interest. Should I / We fail to execute the Contract when called upon to do so I / We do hereby agree that this sum shall be forfeited by me/us to SBI Infra Management Solutions Pvt. Ltd. on behalf of SBI,

2) Our Bankers are :

i)

ii)

The names of partners of our firm are:

i)

ii)

Name of the partner of the firm

Authorised to sign



Or
(Name of person having Power of Attorney to sign the Contract.
(Certified true copy of the Power of Attorney should be attached)

Yours faithfully,
Signature of Contractors.

Signature and addresses of Witnesses

i)

ii)

SAMPLE BUSINESS RULE DOCUMENT

ANNUAL MAINTENANCE CONTRACT FOR ELECTRICAL INSTALLATIONS (HT/LT) AND OPERATION OF ELECTRICAL INSTALLATION.

(A) Business rules for E-tendering:

1. Only **OEMs** who are invited by the SBIIMS shall only be eligible to participate.
2. SBIIMS PVT.LTD. will engage the services of an E-tendering service provider who will provide necessary training and assistance before commencement of online bidding on Internet.
3. In case of e-tendering, SBIIMS will inform the vendor in writing, the details of service provider to enable them to contact and get trained.
4. Business rules like event date, closing and opening time etc. also will be communicated through service provider for compliance.
5. Contractors have to send by email, the compliance form in the prescribed format (provided by service provider), before start of E-tendering. Without this the vendor will not be eligible to participate in the event.
6. The Contractors will be required to submit the various documents in sealed Envelope to the office of SBI Infra Solutions Pvt. Ltd. at the address mentioned hereinbefore by the stipulated date i.e. (1) Hard Copy of Technical Bid duly signed and stamped on each page (2) Demand Draft of specified amount of EMD (3) Demand Draft of Cost of Tender documents (4) Certified copy of A-Class Electrical License). Contractors not submitting any one or more documents shall not be eligible to participate in the on line price bidding.
7. E-tendering will be conducted on schedule date & time.
8. **The e-tendering will be treated as closed only when the bidding process gets closed in all respects for the item listed in the tender.**

(B) Terms & conditions of E-tendering:

SBIIMS PVT.LTD.shall finalize the Tender through e-tendering mode for which **M/s. Antares Systems Limited.** has been engaged by SBIIMS an authorized service provider. Please go through the guidelines given below and submit your acceptance to the same along with your Commercial Bid.

1. E-tendering shall be conducted by SBIIMS through **M/s. Antares Systems Limited.**, on pre-specified date. While the Contractors shall be quoting from their own offices/ place of



their choice, Internet connectivity and other paraphernalia requirements shall have to be ensured by Contractors themselves. In the event of failure of their Internet connectivity, (due to any reason whatsoever it may be) SBIIMS shall not be held responsible & no-further request by the bidder/ tenderer shall be entitled. In order to ward-off such contingent situation bidders are requested to make all the necessary arrangements/ alternatives such as back-up power supply whatever required so that they are able to circumvent such situation and still be able to participate in the E-tendering successfully. Failure of power at the premises of Contractors during the E-tendering cannot be the cause for not participating in the E-tendering. On account of this the time for the E-tendering cannot be extended and SBIIMS Pvt. Ltd. is not responsible for such eventualities.

2. M/s. Antares Systems Limited., shall arrange to train your nominated person(s), without any cost to you. They shall also explain you all the Rules related to the E-tendering. You are required to give your compliance on it before start of bid process.
3. BIDDING CURRENCY AND UNIT OF MEASUREMENT: Bidding will be conducted in Indian currency & Unit of Measurement will be displayed in Online E-tendering.
4. BID PRICE: The Bidder has to quote the rate as per the Tender Document provided by SBIIMS Pvt. Ltd. their appointed Architects.
5. VALIDITY OF BIDS: The Bid price shall be firm for a period specified in the tender document and shall not be subjected to any change whatsoever.
6. Procedure of E-tendering:
 - i. **Online E-tendering :**
 - a. The hard copy of the Technical as well as Price Bid Document are available on the Bank's website during the period specified in the Notice Inviting Tender (NIT).
 - b. Online e-tendering is open to the empaneled bidders who receive NIT from the Architect and qualified for participating in the price bidding as provisions mentioned hereinabove through SBIIMS approved Service Provider.
 - c. The Price-Bid shall be made available online by the Service Provider wherein the contractors will be required to fill-in their Item-wise rates for each item.
 - d. The Contractors are advised not to wait till the last minute to submit their online item-wise quote in the price bid to avoid complications related with internet connectivity, network problems, system crash down, power failure, etc.
 - e. It is mandatory to all the bidders participating in the price bid to quote their rates for each and every item.
 - f. In case, contractor fails to quote their rates for any one or more tender items, their tender shall be treated as "**Incomplete Tender**" and shall be liable for rejection.
7. LOG IN NAME & PASSWORD: Each Bidder is assigned a Unique User Name & Password by M/s. Antares Systems Limited. The Bidders are requested to change the Password after the receipt of initial Password from M/s. Antares Systems Limited. All bids made from the Login ID given to the bidder will be deemed to have been made by the bidder.
8. BIDS PLACED BY BIDDER: Bids will be taken as an offer to execute the work as specified. Bids once made, cannot be cancelled / withdrawn and the Bidder shall be bound to execute the work at the quoted bid price. In case the L-1 Bidder backs out or fail to complete the work as per the rates quoted, SBIIMS shall at liberty to take action as deemed necessary including depaneling such contractors and forfeiting their EMD..
9. At the end of the E-tendering, SBIIMS Pvt. Ltd. will decide upon the winner. SBIIMS Pvt. Ltd. decision on award of Contract shall be final and binding on all the Bidders.



10. SBIIMS shall be at liberty to cancel the E-tendering process / tender at any time, before ordering, without assigning any reason.
11. SBIIMS shall not have any liability to bidders for any interruption or delay in access to the site irrespective of the cause.
12. Other terms and conditions shall be as per your techno-commercial offers and other correspondences till date.
13. OTHER TERMS & CONDITIONS:
 - The Bidder shall not involve himself or any of his representatives in Price manipulation of any kind directly or indirectly by communicating with other suppliers / bidders.
 - The Bidder shall not divulge either his Bids or any other exclusive details of SBIIMS Pvt. Ltd. to any other party.
 - SBIIMS Pvt. Ltd. decision on award of Contract shall be final and binding on all the Bidders.
 - SBIIMS Pvt. Ltd. reserve their rights to extend, reschedule or cancel any E-tendering within its sole discretion.
 - SBIIMS or its authorized service provider M/s. Antares Systems Limited shall not have any liability to Bidders for any interruption or delay in access to the site irrespective of the cause.
 - SBIIMS or its authorized service provider M/s. Antares Systems Limited is not responsible for any damages, including damages that result from, but are not limited to negligence.
 - SBIIMS or its authorized service M/s. Antares Systems Limited will not be held responsible for consequential damages, including but not limited to systems problems, inability to use the system, loss of electronic information etc.

N.B.

- All the Bidders are required to submit the Process Compliance Statement (Annexure II) duly signed to M/s. Antares Systems Limited.
- **All the bidders are requested to ensure that they have a valid digital signature certificate well in advance to participate in the online event.**

PROCESS COMPLIANCE STATEMENT (ANNEXURE II)

(The bidders are required to print this on their company's letter head and sign, stamp before emailing)

To,
M/s. Antares Systems Limited,
24, 3rd Stage, 4th Block,
Basaveshwaranagar, Bangalore- 560 079.
Tel: 080-4935 2000. Mobile no. 7980042472
Email: manojkumar.d@antaressystems.com



AGREEMENT TO THE ANNUAL MAINTENANCE CONTRACT FOR ELECTRICAL INSTALLATIONS (HT/LT) AND OPERATION OF ELECTRICAL INSTALLATION FROM 01.04.2019 TO 31.03.2020

Dear Sir,

This has reference to the Terms & Conditions for the E-tendering mentioned in the Tender document

This letter is to confirm that:

- 1) The undersigned is authorized representative of the company.
- 2) We have studied the Commercial Terms and the Business rules governing the E-tendering as mentioned in RFP of SBIIMS Pvt. Ltd.as well as this document and confirm our agreement to them.
- 3) We also confirm that we have taken the training on the E-tendering tool and have understood the functionality of the same thoroughly.
- 4) We confirm that SBIIMS Pvt. Ltd. and M/s. E-tendering Technologies Ltd.Limited shall not be liable & responsible in any manner whatsoever for my/our failure to access & bid on the e-E-tendering platform due to loss of internet connectivity, electricity failure, virus attack, problems with the PC, any other unforeseen circumstances etc. before or during the E-tendering event.
- 5) We confirm that we have a valid digital signature certificate issued by a valid Certifying Authority.
- 6) We, hereby confirm that we will honor the Bids placed by us during the E-tendering process.

With regards,

Date:

Signature with company seal

Name:

Company / Organization:

Designation within Company / Organization:

Address of Company / Organization:

Scan it and send to this Document on -----



ARTICLES OF AGREEMENT

(On non-judicial Stamp Paper)

AGREEMENT FOR OEM FOR STATE BANK OF INDIA, MUMBAI:- LOCAL HEAD OFFICE MUMBAI

THIS AGREEMENT made on _____ day of _____, 2018 BETWEEN STATE BANK OF INDIA Incorporated under the State Bank of India Act, 1955, having its Local Head Office at Mumbai (hereinafter called 'the Bank', and which expression shall include its successors and assigns) & M/s. _____ having office at _____
_____Mumbai. (hereinafter called 'the contractor' which expression shall unless it be repugnant to the context or meaning thereof mean and include his successors, legal representatives, administrators and assigns).

WHEREAS the Bank had tendered for supply and installation of 2*100 KVA & 1 no of 20 KVA UPS set with battery at Synergy, local Head Office, situated at Bandra Kurla Complex, Bandra(East), Mumbai (hereinafter referred to as "building premises").

AND WHEREAS the Contractor has agreed to accept the contract on terms and conditions hereinafter mentioned.

NOW THEREFORE THIS AGREEMENT WITNESSETH AS UNDER :-

1. That the works to be performed by the contractor have been mentioned in the clauses hereinafter.
2. That during the term of this agreement, the contractor agrees to supply and installation of 2*100 KVA & 1 no of 20 KVA UPS set with battery in the said building premises in good working order for this purpose will provide the following including the scope of work mentioned hereunder. The Contractor shall also carry out the repairs / maintenance on holidays as well as on Sundays. That the contractor shall correct the faults and failures in the electrical installations as per the under mentioned scope of work, brought to his notice by the Bank, within a period of 24 hours on so being informed.
3. Time shall be considered as the essence of this Contract and the Contractor hereby agrees to commence the work soon after the Site is handed over to him or from 14th day after the date of issue of formal work order as provided for in the said Conditions whichever is later and to complete the entire work within **(10 Week)** subject to nevertheless the provisions for extension of time.



Terms & Conditions

1. **FORCE MAJEURE:** Neither party shall be liable for delay in performing obligations if the delay or failure is due to any of the following force majeure i.e. Act of God or any Government Act, fire, earthquake, explosion, civil commotion or anything beyond the control of either party. The party shall use all reasonable endeavours to minimize any such delay.

2. **LIABILITIES AND INDEMNITIES:**

The contractor represents and warrant that the repair, replacement of parts and maintenance service hereby provided, do not violate or infringe upon any patent copyright, trade secret or other property right of any other person or other entity. The contractor agrees that it will and hereby do indemnify the Bank from any claim directly resulting from or arising out of any breach or claimed breach of this warranty.

3. **BUSINESS TERMINATION:**

In the event that the contractor shall close conducting business in the normal course or wind up, make a general assignment for the benefit of creditors, suffer or permit the appointment of a receiver for its business or shall avail itself or become subject to any proceeding under any Act or statute of any country or state relating to insolvency or the protection of rights of creditors, then (at the option of the Bank notwithstanding clause 1.0 of the agreement) this agreement shall terminate and be of no further force and effect and any property or rights of such other party tangible or intangible shall forthwith be returned to it.

4. **TERMINATION OF THIS AGREEMENT:-**

This agreement can be terminated as stated in paragraph No. 1 and 18 above.

5. **GENERAL: -**
 - a) Headings are for guidance only and are intended to be read or construed as per this agreement.
 - b) No amendment to this agreement shall be effective unless it is in writing and signed by duly authorized representative of both the parties.
 - c) Each party warrants and guarantees that it has full powers and authority to enter into and perform this agreement and the person signing this agreement on behalf of each has been property authorized and empowered to enter into this agreement. Each party further acknowledges that it has read this agreement understands it and agrees to be bound by it.
 - d) Works importing the singular include the plural and vice versa.



- e) In the event of any difference or dispute in connection with this agreement over the right or obligations the parties have, the matter shall be settled by arbitration in accordance with the Indian Arbitration and Conciliation Act 1996.
- f) It is agreed that the tender enquiry, i.e. the Bank's letter No _____ dated _____ with its enclosures and subsequent correspondence with the contractor, also form part of this agreement and accordingly are enclosed herewith.
- g) The contractor will bear stamp duty on the original of this agreement and SBIIMS/SBI shall retain the original and contractor shall retain the duplicate.

IN WITNESS WHEREOF THE PARTIES HAVE EXECUTED THIS AGREEMENT ON THE ABOVE-MENTIONED DATE

FOR STATE BANK OF INDIA

FOR CONTRACTOR

ASSTT. GENERAL MANAGER(P&E)

AUTHORISED SIGNATORY WITH STAMP

Place:

Place:

Witness: 1.

Witness:1

TESTING: The UPS system should be tested at factory by the representatives of any of the agencies like ETDC/ERTL/SAMEER/IITs reputed Engineering Colleges located in the region. The quoted price of the UPS System should be inclusive of testing charges and satisfactory test certificate submitted along with the UPS systems/bills. No payments shall be released unless the satisfactory test certificate are produced. All the tests given in the specifications shall be carried out and brought out in the test certificates.

The Bank reserves its right to witness all the testing arranged at vendors work place or at site after installation at the cost of the UPS system vendor who will be required to arrange for all requisite variacs, meters, load or any other equipments required for on site testing etc and test shall be carried out by vendor or other institutions mentioned above in the presence of the Electrical Engineer or as directed by the Bank and test certificates obtained as aforesaid.

One set of pamphlets and operations and instructions manual shall be submitted to the branch and our office. Duly laminated instruction for smooth running of the UPS set in the form of DO's and DON'T'S shall be attached to the front of the control panel else a suitable amount shall be deducted from the vendor's bill as per the descretion of the Bank. The agency shall train the authorized person of the branch in the operations and minor trouble shooting to the UPS System.

The Agency shall send their authorized representative for site meetings arranged by the Bank even at a short notice.

Service calls should be attended within 12 hours. Also details shall be entered in the Bank's log book at the Branch by the service personal then and there.

If the rectification is not done within a considerable time the same shall be reported to our office concerned branch and Administrative Office with due reasons immediately.



Quantities contained in the schedule are only indicative and approximate. The work as actually done will be measured up and paid as per terms and conditions of the contract.

Each page of the tender documents should be signed by an authorized person in token of having acquainted with the General Conditions of contract, specifications, as laid down.

Vendors have to submit list of own service centre in Mumbai with clear postal address, contact person, phone / fax nos. etc., along with the offer.

All disputes are subject to Nagpur jurisdictions only.

Guarantee / defect liability period: The UPS system should be guaranteed for one years from the date of commissioning. Any faulty parts of UPS systems shall be replaced with new one at vendor's cost. In case more than 20% of the batteries are defective within the warranty period then the entire set of battery shall be replaced with new one at the vendors cost.

Insurance (to be added) : The UPS system shall be insured under the electronic equipment insurance policy and not under the General Insurance Policy. The policy shall be handed over to the concerned branch / office.

The UPS system shall be **delivered at site within 10 weeks** from the date of receipt of our order and installation, testing and commissioning shall be completed with in one week from the date of delivery.

The tenderer is required to accept our standard arbitration clause, attached in the document.

Typical technical specifications for on-line UPS system of 100 KVA

1.	Technology	UPS system with pulse width modulation (PWM) technology in true on-line configuration, with double conversion using IGBTs in the inverter and converter. Provision for configuration of Two UPS system in parallel load sharing mode.
2.	Inversion technique	Adaptive pulse width modulation or sine weighted pulse width modulation with high switching frequency (> 12 KHZ for IGBTs)
3.	Input voltage range	(i) Three phase 415volts + 15 % and -30% There should be input to output isolation through an in-built isolation transformer
4.	Input frequency	45 Hz to 55 Hz and it should be compatible with DG set
5.	Nominal DC voltage	
6.	Output Voltage	415 V. A.C. 3 phase input & 3 phase output.
7.	Output Frequency	50 Hz+/- 4 % synchronous to mains 50 Hz +/- 1 % Free running
8.	power factor	The UPS should be provided with auto input p.f. correction system to obtain p.f. 0.95 to unity when the connected load p.f. varies from 0.6 to unity.



9.	Total harmonic distortion (o/p voltage)	< 4 % for non-linear load Less than 2 % for linear load	
10.	harmonic distortion (input current)	≤ 10 % at 100 % load	
11.	Waveform Output	Sine wave	
12.	Overload capacity	110 % for 10 min.	During the test or in actual condition, the load should not get transferred to mains through static switch
		150 % for 1 min	
13.	Transient response and voltage recovery time for step load	For 100 % step load i.e. from full load to no load and no load to full load Dip < 3 %, peak < 3% with recovery time within 3 cycles to normal output voltage	
14.	Efficiency	Overall ≥91.5% ± 1 i.e. between 90.5 & 92.5 % at full load, 90% ± 1 at 66% load & 88% ± 1 at 33 % load	
	Efficiency:	It is the ratio of the Output power in KW of UPS to the input power to the isolation transformer & UPS with battery disconnected, or battery charging power added to the Output	
	Penalty:	Penalty for lower efficiency: if the overall efficiency is found to be less than the Bank's specified value, the UPS is to be rejected and replacement passing the test to be obtained. No further tolerance is permissible.	
15.	Rated KVA	The UPS should be capable to deliver rated KVA at 0.8 i.e 80 KVA UPS should be capable to deliver 64 KW at 0.8 p.f	
16.	Operating temperature	Should be confined for delivering rated KVA at ambient temperature from 0 to 50 degree celcius. It should be capable to deliver approx. 80 % of rated output at 50 degree celcius ambient temperature.	
17.	Relative humidity	Up to 95 % non- condensing at 35 degree celcius.	
18.	Noise level	At 1 meter from the UPS ≤ 60 decibels for 80 KVA (on demand proto-type test certificate be submitted)	
19.	Charger	Built in IGBT based solidstate float-cum-boost charger with automatic boost/ trickle charge mode with current limiting features. The charger characteristics will be such as to match the float/ boost charging of the batteries offered with each UPS. The charger should be designed for minimum 15 % of the total battery current.	
20.	Crest factor	≥ 3	
21.	Interface facility	The UPS system should have necessary hardware & software a) USB port to work on existing operating system. b) Remote manageability through SNMP facility. There should be a facility to monitor & broadcast to all work stations, whenever necessary, condition such as:- i) Power failure : UPS working on batteries preferably to indicate a) Present load in percentage b) Time upto which batteries can support with present	



		<p>load (dynamic battery back up time)</p> <p>c) Warning well in advance of shut down of system.</p> <p>ii) The software should be capable of automatically closing the files (auto file closure features) so that the data / programme files on the computers are not lost/ corrupted.</p>
22	Remote indication unit	In system / system administrator room with indications like Mains on, inverter ON/ OFF / faulty/ trip, Battery low & static bypass ON. 25 meters of inter connecting cable to be included in the price quoted.
23.	Protection	<p>A. Isolation – separate / in- built isolation transformer shall be provided for fully isolation from mains and surge / spike suppressors to be incorporated.</p> <p>B. Current limiting protection (fuse less electronic). Built in overload / short circuit protection with snubber circuits for current limit.</p> <p>C. Soft start on inverter and charger arrangement.</p> <p>D. Over voltage / under voltage protection.(high speed) for device such as IGBTs.</p> <p>E. Short circuit protection through HRC fuses.</p> <p>F. short circuit / overload protection through MCB / MCCB.</p> <p>G. All other protection systems required for safety of UPS system, such as over temperature protection etc.</p> <p>H. Protection against earth leakage current by suitable protective devices like negative sequence current sensors / RCCBs.</p>
24.	Static auto by-pass (i). Switch thyristor based Manual by-pass switch (ii).	Bi directional with change over time less than 10 milli sec. in free running mode and instantaneous in synchronous mode from inverter to by-pass and vice-versa. Should be provided.
25.	Indications	LED/LCB display to be provided mains on, battery on charge, battery low, inverter on, % load, on by-pass, over temperature etc.
26.	Alarm	<p>i. low battery alarm to be provided</p> <p>ii. Mains failure / load on battery alarm to be provided. Both should be audio visual.</p> <p>iii. Over temperature alarm in two stages 1st stage : warning, intermittent audio alarm 2nd stage : tripping, continuous audio visual & resettable.</p>
26.	Metering	<p>Digital – panel meter or LCD display system to indicate the following –</p> <p>i. A.C. voltage – input/output (each phase in case of 3 phase)</p> <p>ii. A.C. current - input/output (each phase in case of 3 phase)</p> <p>iii. % load</p> <p>iv. D.C. battery voltage</p> <p>v. D.C. CHARGING / DISCHARGING current</p> <p>vi. Frequency - input/output</p>
27.	Battery set a. SMF batteries	<p>i. complete with self standing cubicle or cabinet</p> <p>ii. Make like – exide/Panasonic/Numeric /</p>



		<p>Amaraja(Quanta) .</p> <p>iii. Note: only valve regulated lead acid battery (VRLA) type SMF batteries of 20 HR rated capacity electrotype in paste form are acceptable. Any other type including calcium batteries are not acceptable.</p> <p>i. complete with stand</p>
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TESTING:

- i. The supplier shall have facilities to carry out all the tests at factory will have to be satisfactorily carried out before acceptance. A list of tests prescribed is enclosed in annexure E.
- ii. If the UPS does not conform to specifications either during factory test or at site, the Bank reserves the right to reject the same. The successful tenderer shall then have to remove at no extra cost to the Bank the same at his cost from site and supply a new piece conforming to the specifications.
- iii. Tests shall be carried out and certified by the manufacturer and by the agencies specified here under (a) SAMEER (b) ETDC (c) ERTL (d) CPRI (e) ERDA Vadodara (f) I.I.T.s etc.
- iv. the Bank reserves the right to carry out the testing of UPS systems at the cost of UPS vendor, who will be required to arrange for all the requisite variacs, matters, loads etc. and carry out the tests through vendor's personnel in the presence of Bank's officials.

Place:

Date:

Applicants Signature

Stamp

TEST PARAMETERS

SR. NO.	Parameters to be measured	Bank's specification	Test results / remarks
1.	Technology		
2.	Nominal Input voltage		
3.	No load Input voltage range = voltage regulation		
4.	Input frequency range (on D.G. Set)		
5.	Input power factor		
6.	Inversion technique		
7.	Capacity		



8.	Output Voltage		
9.	Output Frequency		
10.	Distortion (o/p voltage) THD		
11.	CREST Factor		
12.	Static by pass switch		
13.	Wave form (output)		
14.	Efficiency		
15.	Indications		
16.	Alarm		
17.	Metering		
18.	DC Isolation between input line & o/p line		
19.	Input current harmonics		
20.	Batteries		
21.	Rated KVA		
22.	Charger		
23.	Manual bypass switch		
24.	Transient response		
25.	Overload capacity 110% & 150%		

We confirm that we comply with all the specifications mentioned above & the terms & conditions mentioned in the Tender Documents are acceptable to us.

Dated this day of 2019

(Signature)

(Name)

(In the capacity of)

Duly authorized to sign Bid for and on behalf of



Part- B
PRICE BID
STATE BANK OF INDIA
PREMISES SECTION
ZONAL OFFICE
NAGPUR

BOQ FOR 80KVA UPS SYSTEM WITH SMF BATTERIES

Sr. No.	Description	Quantity	Rates	Amount
1	2x100KVAUPS with 3Ph Input & 3 Ph output, inbuilt Isolation Transformer, Static Bypass, Manual Bypass Switch & as per our standard specification with Individual bank of LA SMF Batteries of Quanta-Amararaja/ Exide / Equivalent Make Batteries (96000AH) for 30 Minutes backup.	1		
2	20KVA UPS with 3Ph Input & 3 Ph output, inbuilt Isolation Transformer, Static Bypass, Manual Bypass Switch & as per our standard specification with LA SMF Batteries of Quanta-Amararaja/ Exide / HBL / Equivalent Make Batteries (20400AH) for 30 Minutes backup.	1		
3	Transportation, engineer and labour charge for Supervision of Installation & Commissioning of above Equipment	1 Job		
	Comprehensive Annual Maintenance Contract For above two UPS after end of one year defect liability period.			
	i) 1 st Year	1 Job		
	ii) 2 nd Year	1 Job		
	iii) 3 rd Year	1 Job		
	iv) 4 th Year	1 Job		
	v) 5 th Year	1 Job		
	Less buy back of existing 80 KVA(3Nos) & 96 smf 12V100AH with & 20 KVA UPS & Battery(20 nos 42AH)	1 Set		
	Total			

Total in words (Rs. _____)

Note:

- Both UPS should run on parallel redundancy system



2. Battery maintenance for SMF batteries means cleaning, checking of battery conditions, voltage and connections and providing appropriate anti-corrosion material to battery terminal and whatever required to maintain the batteries in good condition.
3. If any isolation is required between UPS output to computer DBs are in the scope of UPS vendor.
4. Cost of providing and fixing battery racks, in any , also to be included in the price.
5. The offer shall also include all interconnecting cables and accessories from the main supply to UPS system, UPS system to batteries, UPS system to output distribution panel and between the vendors equipments.
6. Vendor should visit the before quoting the rate and no of batteries should be designed to accommodate all batteries and UPS systems in the existing UPS room.

SIGNATUTURE AND SEAL OF THE SUPPLIER

Place:

Date: