



RESERVE BANK OF INDIA
Estate Department, Dehradun

NOTICE INVITING TENDER (NIT)
(Only through e-procurement)

This is an open tender enquiry. However, only those bidders/vendors/agencies who are qualified for the work as per qualifications criteria stipulated in the tender are eligible to participate in this tender. Bidders are advised to upload the documents on MSTC website in support of their eligibility for the tender.

a.	Name of the work:	Design, Supply, Installation, Testing and Commissioning of 2X 20 KVA Uninterrupted Power Supply System in N+1 Parallel Redundant Mode at Reserve Bank of India, Main office Building Dehradun 248001
b.	Mode of Tender	e-Procurement System Online (Part I – Techno- Commercial Bid and Part II - Financial Bid through https://www.mstcecommerce.com/eprocho me/rbi)
c.	Date of NIT available to the parties to download through RBI Website www.rbi.org.in	January 01, 2021
d.	<u>Pre-Bid meeting (Offline)</u>	January 07, 2021 at 1100 hrs at Conference Hall, RBI, Dehradun
e.	Estimated cost of Work/Tender	Rs. 9.0 Lakh (Rupees Nine lakh only)
f.	Earnest Money Deposit	₹ 18,000/- in the form of NEFT in favour of Reserve Bank of India, 74/1, Rajpur Road Dehradun – 248001 Details for NEFT Beneficiary Name: RESERVE BANK OF INDIA Beneficiary Ac No: 186003001 IFSC -- RBIS0DNPA01 , (5th and 10th being zero)

g.	Bidding start date of Techno-Commercial Bid and Financial Bid at https://mstcecommerce.com/eprocho/me/rbi	January 07, 2021 at 1300 hrs. (New Tenderers will have to register themselves on MSTC website for taking part in tender process, They must also send an email with required documents at estatedehradun@rbi.org.in for allowing them to view RBI tenders (if not visible).
h.	Date and time of closing of online e-Tender for submission of Techno-Commercial Bid & Financial Bid	January 22, 2021 at 1300 hours
i.	Date & time of opening of Part-I (i.e. Techno- Commercial Bid)	January 22, 2021 at 1500 hours (Part-II of the tender shall be opened after due scrutiny of Part- I and Pre-Qualification Documents. Part- II will be opened on MSTC, only of the respective tenderers who are found eligible after the said scrutiny)
j.	Date & Time of opening of Part- II (Financial Bid)	Part II of the eligible tenderers will be opened after the due scrutiny of documents uploaded with part I of the tender
k.	Transaction fee	To be paid through MSTC Gateway/NEFT/RTGS in favour of MSTC Limited or as advised by M/s MSTC Ltd. Transection fee will be charged by MSTC only.
l.	MSTC Helpdesk Contact Details	Telephone: 033 40645207, 033 40609118, 033 40645316, 033 22901004 and 033 22895064. e-mail id - helpdesk@mstcindia.co.in

RESERVE BANK OF INDIA



RBI/ Dehradun Office/ Estate Department

E-TENDER FOR

**Design, Supply, Installation, Testing and Commissioning of 2X20 KVA
Uninterrupted Power Supply System in N+1 Parallel Redundant Mode**

at

Reserve Bank of India, Main office

Building, Dehradun 248 001

E-Tender No. RBI/Dehradun/ Estate/269/20-21/ ET/377

Part I (Techno-Commercial Bid)

(Containing Section I to Section XII)

Name of Bidder _____

Address _____

Due Date and time of Submission of e-Tender: January 22, 2021 at 1300 hrs.

RESERVE BANK OF INDIA
Estate Department, Dehradun

NOTICE INVITING TENDER (NIT)
(Only through e-procurement)

This is an open tender enquiry. However, only those bidders/vendors/agencies who are qualified for the work as per qualifications criteria stipulated in the tender are eligible to participate in this tender. Bidders are advised to upload the documents on MSTC website in support of their eligibility for the tender.

a.	Name of the work:	Design, Supply, Installation, Testing and Commissioning of 2X 20 KVA Uninterrupted Power Supply System in N+1 Parallel Redundant Mode at Reserve Bank of India, Main office Building Dehradun 248001
b.	Mode of Tender	e-Procurement System Online (Part I – Techno- Commercial Bid and Part II - Financial Bid through https://www.mstcecommerce.com/eprocho/me/rbi)
c.	Date of NIT available to the parties to download through RBI Website www.rbi.org.in	January 01, 2021
d.	Pre-Bid meeting (Offline)	January 07, 2021 at 1100 hrs at Conference Hall, RBI, Dehradun
e.	Estimated cost of Work/Tender	Rs. 9.0 Lakh (Rupees Nine lakh only)
f.	Earnest Money Deposit	₹ 18,000/- in the form of NEFT in favour of Reserve Bank of India, 74/1, Rajpur Road Dehradun – 248001 Details for NEFT Beneficiary Name: RESERVE BANK OF INDIA Beneficiary Ac No: 186003001 IFSC -- RBIS0DNPA01, (5th and 10th being zero)
g.	Bidding start date of Techno-Commercial Bid and Financial Bid at https://mstcecommerce.com/eprocho/me/rbi	January 07, 2021 at 1300 hrs. (New Tenderers will have to register themselves on MSTC website for taking part in tender process, They must also

		send an email with required documents at estatedehradun@rbi.org.in for allowing them to view RBI tenders (if not visible).
h.	Date and time of closing of online e-Tender for submission of Techno-Commercial Bid & Financial Bid	January 22, 2021 at 1300 hours
i.	Date & time of opening of Part-I (i.e. Techno- Commercial Bid)	January 22, 2021 at 1500 hours (Part-II of the tender shall be opened after due scrutiny of Part- I and Pre-Qualification Documents. Part- II will be opened on MSTC, only of the respective tenderers who are found eligible after the said scrutiny)
j.	Date & Time of opening of Part- II (Financial Bid)	Part II of the eligible tenderers will be opened after the due scrutiny of documents uploaded with part I of the tender
k.	Transaction fee	To be paid through MSTC Gateway/NEFT/RTGS in favour of MSTC Limited or as advised by M/s MSTC Ltd. Transaction fee will be charged by MSTC only.
l.	MSTC Helpdesk Contact Details	Telephone: 033 40645207, 033 40609118, 033 40645316, 033 22901004 and 033 22895064. e-mail id - helpdesk@mstcindia.co.in



DISCLAIMER

Reserve Bank of India, Estate Department, Dehradun, has prepared this document to give background information for Tender for **Design, Supply, Installation, Testing and Commissioning of 2X20 KVA Uninterrupted Power Supply System in N+1 Parallel Redundant Mode at Reserve Bank of India, Main office Building Dehradun 248001** to the interested parties. While Reserve Bank of India has taken due care in the preparation of the information contained herein and believe it to be in order, neither Reserve Bank of India nor any of its authorities or agencies nor any of their respective officers, employees, agents or advisors give any warranty or make any representations, express or implied as to the completeness or accuracy of the information contained in this document or any information which may be provided in association with it.

The information is not intended to be exhaustive. Interested parties are required to make their own inquiries and respondents will be required to confirm in writing that they have done so and they do not rely only on the information provided by RBI in submitting the Tender. The information is provided on the basis that it is non-binding on Reserve Bank of India or any of its authorities or agencies or any of their respective officers, employees, agents or advisors. Reserve Bank of India reserves the right not to proceed with the Project or to change the configuration of the Project, to alter the time table reflected in this document or to change the process or procedure to be applied. It also reserves the right to decline to discuss the matter further with any party expressing interest. No reimbursement of cost of any type will be paid to persons or entities expressing interest.

Name of Work: E- Tender for Design, Supply, Installation, Testing and Commissioning of 2X20 KVA Uninterrupted Power Supply System in N+1 Parallel Redundant Mode at Reserve Bank of India, Main office Building, Dehradun 248001.

Important instructions for E-procurement

Bidders are requested to read the terms & conditions of this tender before submitting their online tender.

Process of e-Tender:

A) Registration: The process involves vendor's registration with MSTC e-procurement portal which is free of cost. Only after registration, the vendor(s) can submit his/their bids electronically. Electronic Bidding for submission of Technical Bid will be done over the internet. The vendor should possess Class III signing type digital certificate. Vendors are to make their own arrangement for bidding from a P.C. connected with Internet. MSTC is not responsible for making such arrangement. It may be noted that bids will not be recorded without Digital Signature.

SPECIAL NOTE:

THE TECHNICAL BID HAS TO BE SUBMITTED ONLINE at

www.mstcecommerce.com/eprochome/rbi

1) Vendors are required to register themselves online with www.mstcecommerce.com → e- Procurement → PSU/Govt. Depts. → Select RBI Logo → Register as Vendor → Filling up details and creating own user id and password → Submit.

2) Vendors will receive a system generated mail confirming their registration in their email which has been provided during filling the registration form.

In case of any clarification, please contact RBI/MSTC, before the scheduled time of e-Tender.

Contact person (RBI):

1. Assistant Manager(Tech)

E-mail ID: khemchand@rbi.org.in

Phone no: 7619822111

MSTC Technical Help Desk Nos.- 033 40645207, 033 40609118, 033 40645316, 033 22901004 and 033 22895064.

MSTC Technical Help Desk Email id.- helpdesk@mstcindia.co.in

Contact person (MSTC Ltd):

1.	Shri Sushil Nale (AM)	sushil@mstcindia.co.in	0674 - 2571699(D)	09987758430
2.	Ms Archana, AM	archana@mstcindia.co.in	0674-2571699 (D)	09990673698

B) System Requirement:

- I. Windows 7 or above Operating System
- II. IE-7 and above Internet browser.
- III. Signing type digital signature
- IV. Latest updated JRE 8 (x86 Offline) software to be downloaded and installed in the system.
- v. Kindly ensure that TLS 1.2 is enabled on your Internet Explorer browser to access the website.
Please check through Tools --> Internet Options --> Advanced tab on Internet Explorer browser. For better browsing of the website, please use Internet Explorer version 10 or above

To disable “Protected Mode” for DSC to appear in the signer box following settings may be applied.

Tools => Internet Options => Security => Disable protected Mode if enabled- i.e., Remove the tick from the tick box mentioning “Enable Protected Mode”.

Other Settings:

Tools => Internet Options => General => Click on Settings under “browsing history/ Delete Browsing History” => Temporary Internet Files => Activate “Every time I Visit the Webpage”.

To enable ALL active X controls and disable ‘use pop up blocker’ under Tools→ Internet Options → custom level (Please run IE settings from the page www.mstcecommerce.com once)

2. The Technical Bid and the Financial Bid shall have to be submitted online at www.mstcecommerce.com/eprochome/rbi. Bids will be opened electronically on specified date and time as given in the Tender.

3. All entries in the tender should be entered in online Technical & Commercial Formats without any ambiguity.

Special Note towards Transaction fee:

4. The vendors shall pay the transaction fee using “Transaction Fee Payment” Link under “My Menu” in the vendor login. The vendors have to select the particular tender from the event dropdown box. The vendor shall have the facility of making the payment either through NEFT or Online Payment. On selecting NEFT, the vendor shall generate a challan by filling up a form. The vendor shall remit the transaction fee amount as per the details printed on the challan without making change in the same. On selecting Online Payment, the vendor shall have the provision of making payment using its Credit/ Debit Card/ Net Banking. Once the payment gets credited to MSTC’s designated bank account, the transaction fee shall be auto authorized and the vendor shall be receiving a system generated mail.

5. Transaction fee is non-refundable. A vendor will not have the access to online e-Tender without making the payment towards transaction fee.

NOTE: Bidders are advised to remit the transaction fee well in advance before the closing time of the event so as to give themselves sufficient time to submit the bid.

6. Information about tenders /corrigendum uploaded shall be sent by email only during the process till finalization of tender. Hence the vendors are required to ensure that their corporate email I.D. provided is valid and updated at the time of registration of vendor with MSTC. Vendors are also requested to ensure validity of their DSC (Digital Signature Certificate).

7. E-Tender cannot be accessed after the due date and time mentioned in NIT.

8. Bidding in e-Tender:

- a) Vendor(s) need to submit necessary EMD, Tender fees (if any) and Transaction fees (If any) to be eligible to bid online in the e-Tender. Tender fees and Transaction fees are non-refundable. No interest will be paid on EMD. EMD of the unsuccessful vendor(s) will be refunded by the tender inviting authority. Micro and Small enterprises having Udyam Registration Number (Udyog Aadhar Memorandum Number) are however exempt from submission of EMD.
- b) The process involves Electronic Bidding for submission of Technical and Commercial Bid.
- c) The vendor(s) who have submitted transaction fee can only submit their Technical Bid and

Commercial Bid through internet in MSTC website www.mstcecommerce.com → e-procurement → PSU/Govt depts → Login under RBI → My menu → Auction Floor Manager → live event → Selection of the live event.

- d) The vendor should allow running JAVA application. This exercise has to be done immediately after opening of Bid floor. Then they have to fill up Common terms/Commercial specification and save the same. After that click on the Technical bid. If this application is not run, then the vendor will not be able to save/submit his Technical bid.
- e) After filling the Technical Bid, vendor should click 'save' for recording their Technical bid. Once the same is done, the Commercial Bid link becomes active and the same has to be filled up and then vendor should click on "save" to record their Commercial bid. Then once both the Technical bid has been saved, the vendor can click on the "Final submission" button to register their bid.
- f) Vendors are instructed to use Attach Doc button to upload documents. Multiple documents can be uploaded.
- g) In all cases, vendor should use their own ID and Password along with Digital Signature at the time of submission of their bid.
- h) During the entire e-Tender process, the vendors will remain completely anonymous to one another and also to everybody else.
- i) The e-Tender floor shall remain open from the pre-announced date & time and for as much duration as mentioned above. All electronic bids submitted during the e-Tender process shall be legally binding on the vendor. Any bid will be considered as the valid bid offered by that vendor and acceptance of the same by the Buyer will form a binding contract between Buyer and the Vendor for execution of supply.
- j) It is mandatory that all the bids are submitted with digital signature certificate, otherwise the same will not be accepted by the system.
- k) Buyer reserves the right to cancel or reject or accept or withdraw or extend the tender in full or part as the case may be without assigning any reason thereof.
- l) No deviation of the terms and conditions of the tender document is acceptable. Submission of bid in the e-Tender floor by any vendor confirms his acceptance of terms & conditions of the tender.
- m) Any order resulting from this tender shall be governed by the terms and conditions mentioned therein.
- n) The tender inviting authority has the right to cancel this e-Tender or extend the due date of receipt of bid(s) without assigning any reason thereof.
- o) Vendors are requested to read the vendor guide and see the video in the page www.mstcecommerce.com/eprochome to familiarize them with the system before bidding.

p) No deviation to the technical and commercial terms & conditions are allowed.

Submission of bid in the e-tender floor by any vendor confirms his acceptance of terms & conditions for the tender. Any order resulting from this tender shall be governed by the terms and conditions mentioned therein. The tender inviting authority has the right to cancel this e-tender or extend the due date of receipt of bid(s) without assigning any reasons thereof.

Vendors are requested to read the vendor guide and see the video in the page www.mstcecommerce.com/eprochome to familiarize them with the system before bidding

SCHEDULE OF TENDER (SOT)

Section I

a. Mode of Tender	e-Procurement System (Online Part I –Pre-qualification criteria and Techno-Commercial Bid and Part II - Price Bid through www.mstcecommerce.com/eprochome/rbi)
b. E-tender No.	RBI/ Dehradun/ Estate/269/20-21/ET/377
c. Date of NIT available to parties to download	January 01, 2021 at 1000 hrs.
d. Earnest Money Deposit only via NEFT	₹ 18,000/- as per following details Beneficiary Name: RESERVE BANK OF INDIA Beneficiary Ac No: 186003001 IFSC -- RBIS0DNPA01 (5th and 10th being zero)
e. Pre-Bid Meeting (Offline)	January 07, 2021 at 1100 hrs
f. Date of Starting of e-Tender for submission of online Techno-Commercial Bid and price Bid at www.mstcecommerce.com/eprochome/rbi	January 07, 2021 at 1300 hours
g. Date of closing of online e-tender for submission of Techno-Commercial Bid & Price Bid.	January 22, 2021 at 1300 hours
h. Date & time of opening of Tender Part I	January 22, 2021 at 1500 hours
i. Transaction Fee	Payment of Transaction fee as mentioned in the MSTC portal through MSTC payment gateway /NEFT/RTGS in favour of MSTC LIMITED

Commercial Terms and Conditions

Form of Tender

The Regional Director,
Reserve Bank of India,
Dehradun

Dear Sir,

Having examined the specifications, drawings, designs and schedule of quantities relating to the works specified in 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, we hereby offer to supply and execute the works specified in the said memorandum, within the time specified in the memorandum, at the rates mentioned in the attached schedule of quantities and in all respects with the specifications, designs, drawings 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 us, and in all other respects in accordance with such conditions so far as they may be applicable.

MEMORANDUM

(a)	Description of works	:	Design, Supply, Installation, Testing and Commissioning of 2X20 KVA Uninterrupted Power Supply System in N+1 Parallel Redundant Mode at Reserve Bank of India, Main office Building Dehradun 248001
(b)	Estimated cost	:	Rs.9.0 lakh
(c)	Earnest Money Deposit (via NEFT only)	:	Rs. 18,000/-
(d)	Time allowed for completion of the work from tenth day after the date of written order to commence work.	:	6 weeks

- Should this tender be accepted, we hereby agree to abide by and fulfil the terms and provisions of the said Condition of Contract annexed hereto so far as they may be applicable or in default thereof to forfeit and pay to the Reserve Bank of India the amount mentioned in the said conditions.
- We have deposited a sum of Rs. 18,000/- as earnest money with the Reserve Bank of India, which amount is not to bear any interest. Should we fail to execute the Contract when called upon to do so, we do hereby agree that this sum shall be forfeited by us to the Reserve Bank of India.

Name of the partner of the firm authorized 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 Contractor

(Signatures and addresses of witnesses)

Section II

General instructions to tenderer(s) & special conditions Reserve Bank of India

Design, Supply, Installation, Testing and Commissioning of 2X20 KVA Uninterrupted Power Supply System in N+1 Parallel Redundant Mode at Reserve Bank of India, Main office Building Dehradun 248001

Part I - Commercial Conditions

E-Tenders are invited from Original Equipment Manufacturers for the work of **Design, Supply, Installation, Testing and Commissioning of 2X20 KVA Uninterrupted Power Supply System in N+1 Parallel Redundant Mode at Reserve Bank of India, Main office Building Dehradun 248001**. E-Tenders comprising duly filled in details of both Part-I and Part II specifications of the tender should be uploaded in MSTC website under RBI portal **not later than January 22, 2021 at 1300 hours**.

Only those Original Equipment manufacturer (OEM) who have minimum 5 years' experience in the field of undertaking similar works viz. **Design, Supply, Installation, Testing and Commissioning of 2X20 KVA Uninterrupted Power Supply System in N+1 Parallel Redundant Mode (20 KVA or higher rating) and associated works** for the office buildings/commercial premises/industrial houses till 30th November 2020 executed successfully similar works individually costing as under:

(a) Three works each costing not less than 40% of estimated cost.

OR

(b) Two works each costing not less than 50% of estimated cost.

OR

(c) One work costing not less than 80% of estimated cost.

AND

(d) Have a minimum yearly turnover of 100% of estimated cost during the last 3 financial years ended March 31, 2020, supported by audited financial statements.

AND

(e) A service setup in Dehradun for rendering after sales service.

The proof of service setup such as local electricity bill/telephone bill /Rental Agreement must be uploaded in the e-tendering portal.

AND

(f) Have valid ISO certificate for manufacturing of UPS.

(g) Exemption will be provided to Micro or Small enterprises (MSE firms) having Udyam Registration Number (Udyog Aadhar Memorandum Number) for EMD submission.

Tenderers should upload the following documents in respect of fulfilling their eligibility with suitable file names as indicated.

- i. List of clients/ completed works with all the details (File name eg: CW1,CW2 etc.) – preferably in the format of [Annexure I](#)
- ii. Client certificate regarding performance of the contractor for the qualifying works. (File name eg: CC1,CC2 etc.) – preferably in the format of [Annexure II](#)
- iii. Proof of remittance of EMD
- iv. Banker’s Certificate (more than or equal to the estimated cost of Tender) preferably as per [Annexure V](#)
- v. Audited financial statement for turnover of last 3 financial years ended March 31, 2020. (File name eg: FS1, FS2 etc.)
- vi. Details of service setup- preferably in the format of [Annexure VI](#)
- vii. Details of technical deviations proposed – As per [Annexure VII](#)
- viii. The particulars/Catalogues and the names of manufacturers of specified item.
- ix. Details of Bankers as per [Annexure VIII](#)
- x. Copy of Power of Attorney as per [Annexure IX](#) (Original to be submitted by the successful bidder to RBI Dehradun).
- xi. Technical details of proposed system as per Section X.
- xii. Any other information relevant to the proposed work.

Note (Regarding client certificate):

- In respect of Government Departments/Public sector Undertakings the certificate should be signed by the concerned Executive Engineer or an officer in an equivalent or higher rank.
- In respect of Departments other than Government Departments/Public sector Undertakings apart from the certificates mentioned above the TDS certificates matching with the payments related to the work executed shall also be enclosed.

Only tenderers who qualify as above will be eligible to tender for the work. A tender submitted by a firm who found to be not satisfying the above criteria will be liable for rejection.

2. **Pre-bid meeting/Question session** – A Pre- bid meeting will be held on January 07, 2021 at 1100 hrs at the Conference Hall at RBI, Dehradun to address to all the queries of the interested bidders.
3. Tenderers are required to submit the details of the works carried out by them during last 5 years along with the name and contact no. of the users of the equipment in the enclosed format.

4. A tender submitted by a firm who is found to be not submitting the above details will liable to be rejected.
5. **Tenders shall be submitted in two parts viz. Part I containing Pre-qualification criteria and technical and commercial details of the offer and Part II containing prices only latest by January 22, 2021 at 1300 hours Part I will be opened on January 22, 1500 hours. The technical and commercial details of those tenderers who do not qualify the requirements of pre-qualification criteria will not be considered for evaluation. Only those vendors who qualify the requirements stated in Part I of the tender, technical and commercial conditions/details will be considered for Opening of Part II.**
6. **Vendors are advised to verify website for corrigendum, if any before submitting the bid.**
7. **Vendors are requested to quote the rates as asked in the Part II of the Tender. No change in quoted rates will be accepted. Further the AMC rates quoted shall be automatically multiplied by the NPV factor for 8 years (i.e.5.6321). Buyback value including GST on buyback shall be deducted from the capital cost.**
8. The Reserve Bank of India reserves the right to accept or reject any or all the tenders, in full or in part, without assigning any reason therefore.
9. **Earnest Money:** -The tenderers shall pay as Earnest Money a sum of Rs. 18,000/-. The Earnest Money Deposit shall be remitted to Bank Account of Reserve Bank of India. The account details for NEFT/RTGS transactions are as follows.

Details for NEFT

Beneficiary Name: RESERVE BANK OF INDIA

Beneficiary Ac No: 186003001

IFSC --RBIS0DNPA01 (5th and 10th being zero)

Proof of remittance with transaction number (Scanned copy) shall be attached/ uploaded.

Proof of remittance with transaction number (Scanned copy) shall be attached/ uploaded.

The bidders are also advised to send the proof of remittance with transaction number (scanned copy) to estatedehradun@rbi.org.in

A tender which is not accompanied by such EMD will not be considered. No interest will be paid on EMD. The Earnest Money Deposit of the successful tenderer shall be released without any interest on issue of virtual completion certificate. EMD of the vendors who do not qualify the requirements of pre-qualification criteria will be

returned without any interest on non-acceptance of their bid. MSEs having Udyam Registration Number (Udyog Aadhar Memorandum Number) are exempt from submission of EMD. The Earnest Money Deposit of unsuccessful tenderers in Part II shall be released to them without any interest after award of work.

10. **Validity of tender:** -The tenders shall be valid for a period of 90 days from the date of opening of Part I of the tender.
11. The rates quoted shall be inclusive of all taxes, duties, transport, packing, forwarding, insurance etc. and shall be for the complete work duly installed and commissioned at site. The prices quoted shall remain firm for the entire period of contract and shall not be subjected to any variations in the foreign exchange or variations of any other taxes, levies, duties etc. No import license will be furnished by the Bank. The tenderers shall make their own arrangement for import of any part or components, if any, required for completion of the work.
12. **Completion of work:** - The entire work of supply, installation, testing and commissioning of the system shall be completed within a period of 6 weeks from the 10th day of date of issue of work order.
13. **Damages for non-completion:** If the Contractor fails to complete the works within tender specified completion period, the Contractor shall pay the Employer at rate of 0.25 % of the cost of work executed per week for the period during which the said works shall so remain incomplete subject to a maximum of 10% of the contract amount and the Employer may deduct such damages from any money due to the Contractor.
14. **Service set-up:** - The tenderers shall indicate details of the service center at Dehradun, the staff strength, contact numbers and the availability of spares for the system as per enclosed [annexure-VI](#).
15. **Warranty/Defect Liability period and Annual Comprehensive Maintenance Service contract:**
 - a. The equipment supplied shall be guaranteed against all types of defects for a defect liability period of **one year** from the date of virtual completion. Any defects in the system/sub-assemblies, found within the guarantee period, shall be rectified/ replaced by the tenderer without any additional cost to the Bank. The rate should include for **servicing at monthly interval or earlier as prescribed by the manufacturer and as mutually agreed to during this period.**
 - b. The charges for **comprehensive annual maintenance service (CAMC)** to be provided after the expiry of the one-year guarantee period, shall be quoted by the tenderer separately in their bid. During the **comprehensive annual maintenance**

service contract period, the servicing shall be carried out at monthly interval or earlier as prescribed by the manufacturer and as mutually agreed and the same shall be carried out in addition to any number of breakdown calls. These rates shall be applicable from the date of expiry of one-year guarantee period. Comprehensive annual maintenance service charges shall be paid on half yearly basis on rendering satisfactory service and on submission of service reports.

- c. The charges for comprehensive annual maintenance service shall also include charges for replacement of any part of the UPS System (hardware/ firmware) during service contract period. Comprehensive maintenance should include the following
 - i. The voltage between phase, neutral and earth may be measured periodically.
 - ii. Periodic measurement of cell and terminal voltage to be carried out to prevent open circuit while the UPS is on battery mode.
 - iii. After ensuring the good health of batteries, these should be discharged periodically by operating the UPS on batteries.
 - iv. The UPS to be checked periodically by putting the main supply off and running the UPS through batteries.
 - v. Running the UPS through DG Supply
 - vi. By putting the DG supply OFF and running the UPS through batteries.
 - vii. For PRS mode, by putting one unit OFF at a time for seamless load transfer.
 - viii. By putting both the unit ON with batteries and check the load sharing of both the units.
 - ix. Restore the original condition and check the output parameter of UPS.
- d. The servicing of the UPS system including the battery bank shall be carried out. However, the AMC rate shall not include the cost of replacement of batteries. However, during warranty period of one year defective batteries shall be replaced with new batteries of similar rating and type, without any additional cost to the Bank, if required.
- e. During the warranty period or the comprehensive annual maintenance service period, any fault in the system shall be rectified within 4 hours of receipt of intimation of the defect in the system. The quoted rates shall, therefore, take into account all the cost, including travel cost from the nearest service station. A penalty of Rs.500/- per day subject to maximum of 25% of the annual maintenance charges will be charged, if the defect in the system is not rectified within the period of 4 hours during the AMC period as stated above. In addition to this, if the system **is not rectified within the period of 10 days, the Bank shall have right to rectify the system at risk and at cost of the contractor. The Bank shall have also right to invoke the Bank Guarantee as a penalty for delay in rectifying the system and terminate the contract, if service rendered by the contractor is found to be unsatisfactory.**
- f. The service contract shall be renewed for a further additional period of at least 7 years after the initial annual service contact period of one year after one-year warranty. While renewing the contract the new contract amount will be arrived at based on following formula.

$A_C = A_P [(15+60x(EPI_C/EPI_P) +25x(CPI_C/CPI_P)]/100$	
A_C	The contract amount for the current year.
A_P	The contract amount for the previous year.
EPI_C	Wholesale Price Index for other electrical equipment 6 months prior to the commencement date of contract for the current year.
EPI_P	Wholesale Price Index for Other Electrical equipment 6 months prior to the commencement date of contract for the previous year.
CPI_C	Consumer Price Index for Industrial Workers 6 months prior to the commencement date of contract for the current year.
CPI_P	Consumer Price Index for Industrial Workers 6 months prior to the commencement date of contract for the previous year.

16. Evaluation of tenders:

Tenders will be evaluated on the basis of Net Owning Cost of the System comprising of the Capital Cost of the system (A and taking into account the effect of rates quoted for comprehensive Annual Maintenance service contract charges (AMC) (B) for a period of 7 years after the expiry of one-year defect liability period.

NPV Factor will be calculated assuming 5% increase in contract amount every year after first year of AMC, half yearly payment and a discount rate of 8%.

Net Owning Cost of System =Capital Cost (A) + AMC Charges (B) x MF

(MF is the NPV factor for 8 years (1yr warranty+7-year AMC) = 5.6321)

Minimum Base Rate for Comprehensive AMC

Minimum Base Rate for Comprehensive AMC is 4% (four) of total capital cost. In case, the tenderer quotes the rates for comprehensive AMC lower than 4% (four) of the quoted capital cost, then the 4% (four) of the quoted capital cost will be considered as AMC for calculation of Total Cost of Ownership.

Note: Notwithstanding the above, the Bank shall pay only the quoted rate of the AMC during the currency of the committed contract period subject to renewal formulae indicated in the tender.

17. Testing of UPS system:

- a. UPS system including the Battery Banks shall be tested in the manufacturer's factory/contractor's works to ascertain the compliance of offered specifications
- b. Before offering the UPS System and Battery Banks to the Bank for testing, the firm shall carry out the various tests mentioned in the tender in their factory and forward the copy of those test reports to the Bank along with invitation for Bank's testing. All the testing facilities should be available at the time of testing of UPS by the Bank's engineers. Satisfactory performance at this stage meeting the prescribed limits will

only be construed as acceptance of the UPS. UPS which falls short of prescribed specifications is liable to be rejected.

- c. Further, the UPS system shall be tested at the site for proper functioning and performance.

18. Terms of payment: -

The following terms of payment, subject to statutory deductions, will apply to the contract:

- (a) **First 60%** of the value of quoted rate shall be released, on pro rata instalment basis, after completing all the required documentation and after the equipment/s is/are tested in the factory and on delivery of the same together with other materials including battery bank and are accepted at site by the Employers authorized representatives.
- (b) **40%** of the quoted rate against erection, testing, commissioning and handing over of the system to the Bank and on submission of a Bank Guarantee amounting to **20%** of the contract amount, initially valid for 4 year, in a form ([Annexure-III](#)) acceptable to the Bank as security against due fulfillment of the terms and obligations of the Contract, guarantee period and service contract for the entire life cycle of the equipment.

19. **Performance Bank Guarantee (PBG):** - The estimated life cycle of the UPS system is 8 years. Hence, the initial PBG amounting to 20% of the contract amount shall initially, remain valid for 4 years from the date of commissioning & handing over of the system. Thereafter, contractor shall submit a fresh PBG for amounting 50% of the original PBG amount before four weeks of expiry of initial BG and shall be valid for next four years. If the contractor fails to submit a fresh PBG within the time limit, RBI Dehradun will have the whole right to invoke the earlier BG.

20. **Insurance:** - The Contractor shall at his own expense, arrange to effect and maintain (until the virtual completion of the contract) with an IRDA approved office the following insurance policies in the joint name of employer and himself with the employer being first (Regional Director, Reserve Bank of India) and deposit such policy or policies with the employer from time during the currency of this contract.

- a. Storage, erection, testing and commissioning policy (C.A.R. policy) for the total amount of contract.
- b. Workmen compensation policy.
- c. Third party liability policy with the limits as under.
 - I. Rs.10,00,000/- per annum
 - II. Rs.2,00,000/- per occurrence

21. The payment for the system will be made by Reserve Bank of India, Dehradun. Any dispute arising out of this contract will also be sorted out within the jurisdiction of courts situated in Dehradun.
22. **The contractors shall upload all technical details of the system along with the tender. The tenderers are requested to use the format given in Section X only for this purpose (and do not use their own formats and data sheets). However, if they wish to submit any additional information/details, they may furnish the same on a separate sheet with Part I of the tender.**
23. **Training:** The tenderer shall impart training to the Bank's Engineers/Technicians on the system before handing over of the system without any charge to the Bank.
24. **Agreement:** The successful tenderer shall execute an agreement with the Bank on non- judicial stamp paper in the format in [annexure IV](#) enclosed within ten days of receipt of letter of acceptance. However, the issue of letter of acceptance by the Bank shall be construed as a binding contract, as though such an agreement has been executed and all the terms and conditions shall apply on this contract

Section III

Safety Code

1. First aid appliances including adequate supply of sterilized dressings and cotton wool shall be provided in a readily accessible place.
2. An injured person shall be taken to a public hospital without loss of time, in cases where the injury necessitates hospitalization.
3. Suitable and strong scaffolds should be provided for workmen for all work that cannot safely be done from ground.
4. No portable single ladder shall be over 8 meters in length. The width between the side rails shall not be less than 30 cm (clear) and the distance between two adjacent rungs shall not be more than 30 cm. When a ladder is used an extra mazdoor shall be engaged for holding the ladder.
5. The excavated material shall not be placed within 1.5 meters of the edge of the trench or half of the depth of trench, whichever is more. All trenches and excavations shall be provided with necessary fencing and lighting.
6. Every opening in the floor of a building or in a working platform shall be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing; minimum height shall be one meter.

7. No floor, roof or other part of the structure shall be so overloaded with debris of materials as to render it unsafe.
8. Workers employed on mixing and handling material such as asphalt, cement mortar or concrete and lime mortar shall be provided with protective footwear and rubber hand-gloves.
9. Those engaged in welding works shall be provided with welder's protective eye-shields and gloves.
10. i) No paint containing lead or lead products shall be used except in the forms of paste or readymade paint.
ii) Suitable face masks shall be supplied for use by the workers when the paint is applied in the form of spray or surface having lead paint dry rubbed and scrapped.
11. Overalls shall be supplied by the Contractor to the painters and adequate facilities shall be provided to enable the working painters to wash during the period of cessation of work.
12. Hoisting machines and tackle used in the works, including their attachments, anchorage and support shall be in perfect condition.
13. The ropes used in hoisting or lowering material, or a means of suspension shall be of durable quality and adequate strength and free from defects.
14. The contractor shall provide all the safety gadgets to the workers for carrying out the work as per statutory norms.
15. During the work execution necessary fire safety measures shall also be taken.

Section IV

FIRE SAFETY

1. Cutting / drilling machine and other electrically operated equipment used at site shall be plugged into correctly rated electrical outlets.
2. Only ISI marked 3 pin plug and other appliances and equipment shall be used.
3. Electrical power cables/wires used shall not have any joints and shall be properly rated.
4. All electrical appliances i.e. welding, drilling, cutting machine etc. shall be safely and securely earthed to prevent leakage current while in operation.
5. Before commencing the welding work for the first time on any day, fire section shall be informed and only after the site inspection by the Fire officers/Personnel, work shall be started.
6. Two buckets of water and sand shall be kept in an easily accessible area on the site.
7. Fire extinguishers recommended and issued by fire officers shall be kept on the site.
8. Used paint drums shall be stored in specified store only after closing them properly.
9. Personal protective equipment such as safety shoes, hand gloves, welder's mask, ear plug etc. depending upon the requirement of the work shall be provided by the contractor to the workmen to prevent occupational health hazards.
10. The safety belt shall be provided by the contractor and used by the workmen while working from height for more than 10' from Ground level.
11. None of the passages near lift lobby and staircases shall be used for stacking / dumping any kind of materials/waste.
12. Both the staircase doors shall be normally kept closed.
13. None of the fire extinguishers shall be removed/shifted from its designated location.
14. Power supply shall be switched off from the mains when equipment is not in use.
15. Wood-shavings and saw-dust generated from the work shall be collected on daily basis, removed from site and stored at the designated place in proper manner.
16. Any debris generated from the work shall be collected on daily basis, removed from site and stored at the designated place in proper manner.
17. Battery operated emergency light/torches shall be provided by the contractor to the workmen while working beyond office hours.

- g) "Net Prices" If in arriving at the contract amount the Contractor shall have added to or deducted from the total of items in the Tender any sum, either as a percentage or otherwise, then net price of any item in their tender shall be the sum arrived at by adding to or deducting from the actual figures appearing in the Tender as the price of that the item a similar percentage or proportionate sum provided always that in determining the percentage or proportion of the sum so added or deducted by the Contractor the total amount of the any Prime Cost items and provisional sums of money shall be deducted from the total amount of the tender. The expression "net rates" or "net prices" when used with reference to the contract or account shall be held to mean rates or prices so arrived at.
- h) "The works" Supply, Installation, Testing and Commissioning of 2X20 KVA Uninterrupted Power Supply System of Bank's Office Building at Reserve Bank of India, Dehradun 248001

2. **Scope of Contract:** The contractor shall carry out and complete the said work in every respect in accordance with this contract and with the directions of and to the satisfaction of the Bank's Engineer. The Bank's Engineer may in his absolute discretion and from time to time issue further drawings and/or written instructions, details, direction and explanations which are hereafter collectively referred to as "Bank's Engineer's instruction in regard to":
- a) The variations or modifications of the design, quality or works or the addition or omission or substitutions of any work.
 - b) Any discrepancy in the Drawing or between the Schedule of Quantities and/or Drawing and/or specifications.
 - c) The removal from the site of any materials brought thereon by the contractor and the substitution of any other material therefor.
 - d) The removal and/or re-execution of any works executed by the contractor.
 - e) The dismissal from the works of any persons employed thereupon.
 - f) The opening up for inspections of any work covered up.
 - g) The amending and making good of any defects under clause 20 hereof.

The contractor shall forthwith comply with and duly execute any work comprised in such Bank's Engineer's instructions provided always that verbal instructions, directions and explanations given to the Contractor or his representative upon the works by the Bank's Engineer shall, if involving a variation, be confirmed in writing by the Contractor within seven days, such shall be deemed to be Employer's instructions within the scope of the Contract.

The contractor shall submit a statement of variations giving quantity and rates duly supported by analysis of rates, vouchers etc. The rates on scrutiny and final acceptance by the Employer shall form a supplementary tender. The Employer shall not be liable for payment of such variations until these statements are sanctioned by him.

3. The Contract shall be executed in triplicate and the Bank's Engineer, the Employer and the Contractor shall be entitled to one executed copy each for his use. The contractor shall prepare the line diagram, system configuration drawing and Lay out plan of the site for carrying out the work. Before the issue of the final certificate to the Contractor he shall submit to the Bank's Engineer all Drawings and Specifications.
4. The Contractor shall provide at his cost everything necessary for the proper execution of the works according to the intent and meaning of the Drawings, Schedule of Quantities and specifications taken together, whether the same may or may not be particularly shown or described therein provided that the same can reasonably be inferred therefrom, and if the Contractor finds any discrepancy in the Drawings or between the Drawings, Schedule of quantities and Specifications, he shall immediately and in writing refer the same to the Bank's Engineer, who shall decide which is to be followed.
5. **Authorities, notices and patents:** The Contractor shall conform to the provisions of any Act of the Legislature relating to the works, and to the regulations and bye-laws of any authority, and of any water, electricity supply and other companies and/or authorities with whose system the structure is proposed to be connected, and shall, before making any variations from the Drawings or Specifications that may be necessitated by so conforming, give to the architect written notice, specifying the variation proposed to be made and the reason for making it and apply for instructions thereon. In case the Contractor does not receive such instructions within ten days, he shall proceed with the work conforming to the provisions, regulations, or bye-laws in question, and any variation so necessitated shall be dealt with under clause 17 hereof.

The contractor shall bring to the attention of the Employer all notices required by the said Acts, regulations or bye-laws to be given to any authority and pay to such authority or to any public office all fees that may be properly chargeable-in respect of the works and lodge the receipts with the Employer.

The Contractor shall indemnify the Employer against all claims in respect of patent rights and shall defend all actions arising from such claims and shall himself pay all royalties, license fees, damages cost and charges of all and every sort that may be legally incurred in respect thereof.

6. **Setting out of work:** The contractor shall set out the works and shall be responsible for the true and perfect setting out of the same and for the correctness of the positions levels, dimensions and alignment of all parts thereof. If at any time any error in this respect shall appear during the progress of the works or within a period of one year from the completion

of the works, the Contractor shall, if so required, at his own expense rectify such error to the satisfaction of the Bank's Engineer.

7. **Materials and Workmanship to conform to description**: All materials and workmanship shall so far as procurable be of the respective kinds described in the Schedule of Quantities and/or specifications and in accordance with the contract and the Contractor shall furnish to the Employer with all invoices, accounts, receipts and other vouchers to prove that the materials comply therewith. The Contractor shall at his own cost arrange for and/or carry out any test of any materials.
8. **Contractor's superintendence and representative on the works**: The Contractor shall give all necessary personal superintendence during the execution of the works and so long thereafter as the Employer may consider necessary until the expiration of the "Defects Liability Period" stated in the Appendix hereto. The contractor shall, also during the whole time the works are in progress employ a competent representative who shall be constantly in attendance at the works while the men are to work. Any directions, explanations, instructions or notice given by the Bank's Engineer to such representative shall be held to be given to the Contractor.
9. **Dismissal of workmen**: The Contractor shall on the request of the Bank's Engineer immediately dismiss from the works any person employed thereon by him who may, in the opinion of the Bank's Engineer, be incompetent or misconduct himself and such persons shall not be again employed on the works without the permission of the Bank's Engineer.
10. **Access to works**: The Employer, shall at all reasonable times, have free access to the works and/or to the workshops, factories or other places where materials are lying or from which they are being obtained and the Contractor shall give every facility to the Employer necessary for Inspections and examination and test of the materials and workmanship. No person not authorized by the Employer except the representatives of public authorities shall be allowed on the works at any time.
11. **Bank's Engineer**: The term Bank's Engineer shall mean the person appointed and paid by the Employer to inspect the works. The Contractor shall afford the Bank's Engineer every facility and assistance for inspecting the works and materials and for checking and measuring time and materials.

The Bank's Engineer, or the Employer shall have power to give notice to the Contractor or to his representative of non-approval or any work or materials and such work shall be suspended, or the use of such materials shall be discontinued. The work will, from time to time, be examined by the **Assistant Manager (Tech.)** but such examination shall not in any way exonerate the Contractor from the obligation to remedy any defects which may be found to exist at a stage of the works or after the same is completed. Subject to the

limitations of this clause the Contractor shall take instructions only from the Bank's Engineer.

12. **Assignment and Subletting**: The whole of the works included in the Contract shall be executed by the Contractor and the contractor shall not directly or indirectly transfer, assign or under-let the Contract or any part share thereof or any interest therein without the prior written consent of the Employer and not undertaking shall relieve the Contractor from the full and entire responsibility of the Contract or from active superintendence of the works during their progress.
13. No alteration, omission or variation shall vitiate this contract but in case the Bank's Engineer thinks proper at any time during the progress of the works to make any alterations in, or addition to, or omissions from the works or any alteration in the kind of quality of the materials to be used therein and shall give notice thereof in writing under his hand to the Contractor, the Contractor shall alter, add to, or omit from, as the case may be, in accordance with such notice, but the contractor shall not do any work extra to or make any alterations or additions to or omissions from the works or any deviation from any of the provisions of the Contract. Stipulations, specifications or Contract Drawings without the previous consent in writing of the Employer and the value of such extras alterations, additions or omission shall, in all cases, be determined by the Employer in accordance with the provisions of Clause 17 hereof, and the same shall be added to, or deducted from the Contract Amount, as the case may be accordingly.
14. **Schedule of Quantities**: The Schedule of quantities, unless otherwise stated shall be deemed to have been prepared in accordance with the Standard Method of Measurement.

Any error in description or in quantity or in omission of items from the schedule of quantities shall not vitiate this contract but shall be rectified and the value thereof, as ascertained under Clause 17 hereof, shall be added to, or deducted from the Contract Amount (as the case may be) provided that no rectification of errors, if any, shall be allowed in the Contractor's schedule of rates.

15. **Sufficiency of Schedule of Quantities**: The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the prices stated in the Schedule of Quantities and/or the schedule of rates and prices which rates and prices shall cover all his obligations under the contract, and all matters and things necessary for the proper completion of the works.
16. **Measurement of works**: The Bank's Engineer may, from time to time, intimate to the contractor that he requires the works to be measured, and the Contractor shall forthwith attend or send a qualified agent to assist Assistant Engineer in taking such measurements and calculations and to furnish all particulars or to give all assistance required by any of them.

If the Contractor not attend or neglect or omit to send such agent then the measurement taken by the Bank's Engineer or a person approved by him shall be taken to be correct measurement of the works. Such measurements shall be taken in accordance with the Mode of Measurements detailed in the Specifications.

The Contractor or his Agent may at the time of measurement take such notes and measurement as he may require.

All authorized extra works, omissions and all variations made with the prior approval in writing of Employer shall be included in such measurements.

17. **Prices for extra:** The Contractor may, when authorized and shall, when directed, in writing by the Employer, add to, omit from or vary the works shown upon the drawings, or described in the specification, or included in the schedule of Quantities, but the contractor shall make no addition, omission or variation without such authorization or direction. A verbal authority or direction by the Bank's Engineer shall, if confirmed by them in writing within seven days, be deemed to have been given in writing.

No claim for an extra shall be allowed unless it shall have been executed under provisions of clause above hereof with the concurrence of the Employer herein mentioned. Any such extra in herein referred to as authorized and shall be made in accordance with the following provisions.

- (a) (i) The net rates or prices in the original tender shall determine the valuation of the extra work where such extra work in similar character and executed under conditions as the work priced therein.
(ii) Rates for all items, wherever possible should be derived out of the rates given in the priced Schedule of Quantities.
- (b) The net prices of the original tender shall determine the value of items omitted provided if omissions vary the conditions under which any remaining items of works are carried out, the prices for the same shall be valued under sub-clause(c) hereof.
- (c) Where the extra works are not of similar character and/or quoted under similar conditions as aforesaid or where the omissions vary the conditions under which any remaining items of works are carried out or if the amount of any omissions or additions relative the amount of the whole of the Contract works or to any part thereof shall be such that in the opinion of the Bank's engineer, the net rate or price contained in the priced Schedule of Quantities or tender or for any item of the works involves loss or expenses beyond that reasonably contemplated by the contractor or is by reason of such omission or addition rendered unreasonable or inapplicable, the Bank's Engineer shall fix such other rate or price as in the circumstances he shall think reasonable and proper, with the prior approval in writing of the Employer.
- (d) Where extra work cannot be properly measured or valued, the Contractor shall be allowed day work prices as the net rates stated in the tender or the Priced Schedule or Quantities or, if not so stated, then in accordance with the local day work rates

and wages for the district provided that in either case vouchers specifying the daily time (the workmen's names) and materials employed be delivered for verification to the Bank's Engineer at or before the end of the week following that in which the work has been executed.

The measurement and valuation in respect of the Contract shall be completed within the "period of final measurements" stated in the Appendix or if not stated then within six months of the completion of the Contract works as defined in Clause 21 hereof.

18. Unfixed materials when taken into account to be the property of the Employer

Where in any certificates (of which the Contractor has received payment) the Bank's Engineer has included the value of any unfixed materials included for and/or placed on or adjacent to the works such materials shall become the property of the Employer and they shall not be removed except for use upon the works, without the written authority of the Employer. The Contractor shall be liable for any loss of, or damage to, such materials.

19. **Removal of improper work** : The Employer shall, during the progress of the works, have power to order in writing from time to time the removal from the works within such reasonable time or times as may be specified in the order of any materials which in the opinion of the Bank's Engineer are not in accordance with the Specifications, the substitutions of proper materials, and the removal and proper re-execution of any work executed with materials or workmanship not in accordance with the drawings & specifications or instructions and the contractor shall forthwith carry out such order at his own cost. In case of default on the part of Contractor to carry out such order, the Employer shall have the power to employ any pay other persons to carry out the same; and all expenses consequent thereon, or incidental thereto, shall be borne by the Contractor, or may be deducted by the Employer from any moneys due, or that may become due, to the Contractor.

20. **Defects after virtual completion** : Any defect, shrinkage, settlement or other fault which may appear within the "Defects Liability Period" stated in the Appendix hereto, or, if none stated then within twelve months after the virtual completion of the works, arising in the opinion of the Employer from materials of workmanship not in accordance with the contract, shall upon the direction in writing of the Employer, and within such reasonable time as shall be specified therein, be amended and made good by the Contractor, at his own cost and in case of default the Employer may employ and pay other persons to amend and make good such defects, shrinkage settlements or other faults, and all damages loss and expenses consequent thereon are incidental thereto shall be made good and borne by the Employer or may be deducted by the Employer, upon the Bank's Engineer's Certificate in writing, from any money due or that may become due to the Contractor, or the Employer may in lieu of such amending and making good by the Contractor deduct from any money due to the Contractor a sum, to be determined by the

Employer equivalent to the cost of amending such work and in the event of the amount retained under clause 32 hereof being insufficient, recover the balance from the Contractor, together with any expenses the Employer may have incurred in connection therewith. Should any defective work have been done or materials supplied by any sub-contractor employed on the works who has been nominated as provided under clause 12 and 22 hereof, the contractor shall be liable to make good in the same manner as if such work or material had been done or supplied by the Contractor and been subject to the provision of this clause 2 hereof. The contractor shall remain liable under the provisions of this clause the signing of any certificate or the passing of any accounts by the Employer.

21. **Certificate of virtual completion and defects liability period:** The works shall not be considered as completed until the Bank's Engineer has certified in writing that they have been virtually completed. The defects liability period shall commence from the date of such certificates.
22. **Nominated Sub-Contractor:** All Specialists, Merchants, Tradesmen and others executing any work of supplying and fixing any goods for which the prime cost prices or provisional sums are included in the Schedule of Quantities and/or Specifications who may be nominated or selected by the Employer or hereby declared to be sub-contractors employed by the contractor and are herein referred to as nominated sub-contractors.

No nominated sub-contractors shall be employed on or in connection with the works against the Contractor shall make reasonable objection are (save where the Architect and the Contractor shall otherwise agree) who will not enter into contract providing.

- (a) That the nominated sub-contractor shall indemnify the contractor against the same obligation in respect of the sub-contract as the contractor is under in respect of this contract.
- (b) That the nominated sub-contractor shall indemnify the contractor against claims in respect of any negligence by the sub-contractors his servants or agents or any misuse by him or them or any scaffolding or other plant, the property of the Contractor or under any Workmen's Compensation Act in force.
- (c) Payment shall be made to the nominated sub-contractor within fourteen days of his receipt of the Employer's Certificate provided that before any Certificate is issued the Contractor shall upon request furnish to the Bank proof that all nominated sub-contractors accounts included in previous certificates have been duly discharged; in default whereof the Employer may pay the same upon a Certificate of the Bank and deduct the amount thereof from any sums due to the Contractor. The exercise of this power shall not create private of contract as between Employer and Sub-Contractor.

23. **Other persons employed by Employer:** The Employer reserves the right to use premises and any portion of the site for the execution of any work not included in this

Contract which it may desire to have carried out by other persons, and the Contractor shall allow all reasonable facilities for the execution of such work but shall not be required to provide any plant or material for the execution of such work except by special arrangement with the Employer. Such work shall be carried out in such manner as not to impede the progress of the works included in the Contract and the Contractor shall not be responsible for any damage or delay which may happen to or occasioned by such work.

24. **Insurance in respect of damage to person and property**: The Contractor shall be responsible for all injury to persons, animals or things, and for all structural and decorative damage to property which may arise from the operation or neglect of himself or of any nominated sub-contractor or any employee of either, whether such injury or damage arises from carelessness accident or any other clause whatever in any connected with the carrying out of this Contract. This clause shall be held to include inter alia, any damage to buildings, whether immediately adjacent or otherwise, and any damage to road, streets, foot-paths, bridges or ways as well as damage caused to the buildings and works forming the subject of this contract by frost, rain, wind or other inclemency of weather. The Contractor shall indemnify the Employer and hold it harmless in respect of all and any expenses arising from any such injury or damage to persons or property as aforesaid and also in respect of any claim made in respect of injury or damage under any acts of any legislature or otherwise and also in respect of any award or compensation or damages consequent upon such claim.

The Contractor shall reinstate all damage of every sort mentioned in this clause, so as to deliver up the whole of the Contract works complete to and perfect in every respect and so as to make good or otherwise satisfy all claims for damage to the property of third parties.

An insurance policy covering third party liability shall be taken by the contractor to cover the loss/disablement of human life (persons not belonging to the contractor). This shall also cover the risk of damages to other's materials/equipment/properties including those, if any of the banks during construction/erection/commissioning of the said contract work at site. The value of third party liability for compensation for loss of human life or full /partial disablement shall be of required statutory value for full and partial disablement and shall nevertheless cover such compensation as may be awarded by a court of law. Cover for damage to other's equipment/property shall be as approved by the bank. The sub-contractors of the contractor shall not be holders or beneficiaries in the policy nor shall they be named in the policy. The bank shall be the Regional Director holder of the policy along with the contractor. The bank reserves the exclusive right to assign the policy.

The Contractor shall indemnify the Employer against all claims which may be made against the Employer by any member of the public or other third party in respect of anything which may arise in respect of the works or in consequences thereof and shall at his own expenses arrange to effect and maintain, until the virtual completion of the contract, with an approved office a policy of insurance in the joint names of the Employer and the Contractor against such risks and deposit such policy or policies with the Architect from time to time during the currency of this contract. The Contractor shall also similarly

indemnify the Employer, against all claims which may be made upon the Employer whether under the Workmen's Compensation Act or any other status in force during the currency of this contract or at common law in respect of any employee of the Contractor or any Sub-Contractor and shall at his own expenses effect and maintain, in the joint names of the Employer and the Contractor against such risks and deposit such policy or policies with the Architect from time to time during currency of the Contract.

The Contractor shall be responsible for any liability which may be executed from the Insurance Policies above referred to and also for all other damage to any person, animal or property arising out of the incidental to the negligent or defective carrying out of this Contract transit, storage, erection, testing & commissioning policy. He shall also indemnify the Employer in respect of any costs, charges or expenses arising out of any claim or proceedings and also in respect of any award of compensation or damages arising therefrom.

The Employer shall be entitled to deduct the amount of any damage, compensation, costs, charges and expense arising of accruing from or in respect of any such claims or damage from any or all sums due or to become due to the Contractor without prejudice to the Employer's other rights in respect thereof.

25. **Insurance**: The contractor shall, within 14 days from the date of commencement of the works, insure the works at his cost and keep them insure until the virtual completion of reworks, against loss or damage by fire with an office **in the joint names of the employer and the contractor (the name of the former being placed first in the policy) for the full amount of the contract.** Such policy shall cover the property of the "Employer" only. **The contractor shall deposit the policy and receipts for the premium with the employer within twenty-one days from the commencement of the works.** In default of the contractor, insuring as provided above, the employer may so insure the works and may deduct the premium paid from any moneys due or which may become due to the Contractor without prejudice to the other rights of the Employer in respect of such default. In case it becomes necessary to suspend the works, the Contractor shall as soon as the claim under the policy is settled, or the work reinstated by the Insurance Office, should they elect to do so, proceed with all due diligence with the completion of the works in same manner as though the fire had not occurred and in all respects under the same conditions of Contract. The Contractor in case of rebuilding or reinstatement after fire shall be entitled to such extension of time for completion as deems fit.

26. **Date of commencement and completion**: The Contractor shall be allowed admittance to the site on "Date of Commencement" stated in the Appendix hereto, or each later date as may be specified by the Employer and be shall thereupon and forthwith begin the works and shall regularly proceed with and complete the same (except such painting or other decorative work as the bank may desire to delay) or before the "Date of Completion" stated in the Appendix subject nevertheless to provisions for extension of time hereinafter contained.

27. **Damages for non-completion**: If the Contractor fails to complete the works by the date stated in the Appendix or within any extended time under Clause 26 and 20 here the Contractor shall pay the Employer the sum named in the Appendix as " Liquidated Damages" for the period during which the said works shall so remain incomplete and the Employer may deduct such damages from any money due to the Contractor.
28. **Delay and extension of time**: If in the opinion of the Employer the works be delayed(a) by force major or (b) by reason of any exceptionally inclement weather or c) by reason of proceedings taken or threatened by or dispute with adjoining or neighboring owners or public authorities arising otherwise than through contractor's own default or (d) by the works or delays of other contractor or Tradesmen engaged or nominated by the Employer and not referred to in the schedule of quantities and/or specifications or (e) by reasons of Bank's Engineer instruction as per clause 17 hereof (f) by reason of civil commotion, local combination of workmen or strike or lockout affecting any of the building trades or (g) in consequence of the Contractor not having received in due time necessary instructions from the Bank for which he shall have specifically applied in writing or (h) from other causes which the Bank may certify as beyond the control of contractor or (l) in the event, the value of the work exceed the value of the Priced Schedule of Quantities owing to variation, the Bank may make a fair and reasonable extension of time for completion shall as soon as may be given written notice thereof to the bank but the Contractor shall nevertheless constantly use his endeavors to prevent delay and shall do all that may reasonably has required to the satisfaction of Bank to proceed with work.
29. **Contractor's failure to comply with Employers instruction**: If the Contractor after receipt of written notice from the Employer requiring compliance within 10 days fails to comply with such further drawings and/or Bank's instructions the Employer may employ and pay other persons to execute any such work whatsoever that may be necessary to give effect thereto, and all costs incurred in connection therewith shall be recoverable from the Contractor by the Employer as a debt or may be deducted by him from any moneys due to the Contractor.
30. **Termination of Contract by the Employer**: If the Contractor being an individual or a firm commits any "act of insolvency" or shall be adjudged an insolvent or being an incorporated company shall have an order for compulsory winding up made against it or pass an effective resolution for winding up voluntarily or subject to the supervisions of the court and the Official Assignee or the Liquidator in such acts of insolvency or winding up, as the case may be, shall be unable within seven days after notice to him requiring him to do so to show the reasonable satisfaction of the Architect that he is able to carry out and fulfill the Contract and to give security therefore, if so required by the Architect.

Or if the Contractor (whether an individual, first or incorporated company shall suffer execution or other process of court attaching property to be issued against the Contractor.

Or shall suffer any payment under this contract to be attached by or on behalf of any of the creditors of the Contractors.

Or shall assign to sublet this Contract without the consent in writing of the Employer first had and obtained.

Or shall charge or encumber this Contract or any payments due or which may become due to the Contractor hereunder.

- (i) Has abandoned the Contract, or
- (ii) Has failed to commence the works, or has without any lawful excuse under these conditions suspended the progresses of the works for fourteen days after receiving from the Bank notice to proceed or
- (iii) Has failed to proceed with the work with such due diligence and failed to make such due progress as would enable the works to be completed within the time agreed upon, or
- (iv) Has failed to remove materials from the site or to pull down and replace work for seven days receiving from the Bank written notice that the said materials or work were condemned and rejected by the Bank's Engineer under these conditions' or
- (v) Has neglected or failed persistently to observe and perform all of any of the acts, matter or things by the Contract to be observed and performed by the Contractor for seven days after written notice shall have been given to the Contractor requiring the Contractor to observe or perform the same.

Then and in any of the said cases the Employer may, notwithstanding any previous waiver, after giving seven days' notice in writing to the Contractor, determine the Contract, the whole of which shall continue in force as fully as if the Contract has not been so determined, and so if the works subsequently execute had been executed by or on behalf of the Contractor. And further, the Employer by his agents or servants may enter upon and taken possession of the works and all plant, tools scaffoldings, sheds, machinery, steam and other power utensils and materials lying upon the premises or the adjoining lands or roads, and use the same as his own property or may employ the same by means of his own servants and workmen in carrying on and completing the work or by employing any other Contractor or other person or persons to complete the works, and the Contractor shall not in any way interrupt or do any act matter or thing to prevent or hinder such other contractor or other person or persons employed for completing and finishing or using the materials and plant for the works. When the works shall be completed or as soon thereafter as convenient the Bank shall give a notice in writing to the Contractor to remove his surplus materials and plant, and should the Contractor fail to do so within a period of fourteen days after receipt thereof by him, the Employer may sell the same by public auction, and give credit to the Contractor for the net amount realized. The employer shall thereafter ascertain and certify in writing under his hand what of the said plant and materials so taken possessions or by the Employer and the expenses or loss which the

Employer shall have been put to in procuring the works to be completed and the amount. If any, owing the Contractor and the amount which shall be so certified shall thereupon be paid by the Employer to the Contractor or by the Contractor to the Employer, as the case may be, and the Certificate of the Bank shall be final and conclusive between the parties.

31. **Termination of Contract by Contractor**: If this payment of the amount payable by the Employer under Certificate of the Bank's Engineer shall be in arrears and unpaid for thirty days after notice in writing requiring payment of the amount as aforesaid shall have been given by the Contractor to the Employer, or if the Employer interferes with or obstructs the issue of any such Certificate, or if the Employer shall repudiate the Contract, or if the works be stopped for three months under the order of the Architect or the Employer or by any injunction or other order of any court of Law, then and in any of the said cases the Contractor shall be in liberty to determine the Contract by notice in writing to the Employer, and he shall be entitled to recover from the Employer, payment for all works executed and for any loss he may sustain upon any plant or materials supplied or purchased or prepared for the purpose or the Contract.

In arriving at the amount of such payment the net rates contained in the Contractor's original Tender shall be followed or where the same may not apply valuation shall be made in accordance with Clause 17 hereof.

32. **Certificates and Payments**: The Contractor shall be paid by the Employer from time to time by installments under interim Certificate to be issued by the Bank's Engineer on account of the works executed work to the approximate value named in the Appendix as 'Value of work for Interim Certificate' has been executed in accordance with this Contract, subject, however, to a retention of the percentage of such value named in the Appendix as "Total Retention Money" after which time the installments shall be up to the full value of the work subsequently so executed and fixed in the building. And when the works have been virtually completed, the Contractor shall be paid by the Employer in accordance with the Certificate to be issued by the Bank's Engineers the sum of money named in the Appendix as "installment after Virtual Completion" being a part of the said Total Retention Money. And the Contractor shall be entitled to the payment of the Final Balance in accordance with the final Certificate at the expiration of the period referred to as 'the Defects liability Period' in the Appendix hereto from the date of virtual completion or as soon as after expiration of such period as the works shall have been finally completed and all defects made good according to the true intent and meaning hereof whichever shall last happen provided always or at or after their completion shall not relieve the Contractor from his liability under clause 21 and 36 nor relieve the Contractor of his inability in cases of fraud, dishonesty, or fraudulent concealment relating to the works or materials or to any matter dealt with in the Certificate and in case of the all defects and insufficiencies in the works or materials which a reasonable examination would not have disclosed.

The Employer shall have power to withhold any Certificate if the works or any parts thereof are not being carried out to his satisfaction.

33. **Delayed Payment:** Any amounts payable by the Employer to the Contractor shall, if not paid within the 'period of honouring Certificates' names in the Appendix carry interest at the rate named in the Appendix as the "Rate of interest for delayed payment" from the date upon which sum ought to have been paid by the Employer until the payment.
34. The decision, opinion, direction Certificate (except for payment) with respect to all or any of the matters under Clauses 2(a,b), 4,5, 14, 20 (a,b,c,d and f) hereof (which matters are herein referred to as the excepted matters) shall be final and conclusive and binding on the parties hereto and shall be without appeal. Any other decision, opinion, direction, shall be subject to the right of Arbitration and review under the Clause 35 hereof in the same way in all respects (including the provisions as to opening the reference).
35. **Settlement of disputes by Arbitration:** All disputes and differences of any kind whatever arising out of or in connection with the contract or the carrying out of the works (whether during the progress of the works or after the completion and whether before or after the determination abandonment or breach of the contract) shall be referred to and settled by the Bank who shall state its decision in writing. Such decision may be in the form of a final certificate or otherwise. The decision of the Bank with respect to any of the excepted matters shall be final and without appeal as stated in hereof. But if either the Contractor be dissatisfied on any matter on which a decision is taken by the Bank as above, except any of the expected matter the Contractor may within 28 days after receiving notice of such decision give a written notice to the other party requiring that the matters in dispute be arbitrated upon. Such written notice shall specify the matters, which are in dispute or difference of which such written notice has been given. If both the parties agree, a single arbitrator would be appointed for the purpose. In case no agreement could be reached on the appointment of single arbitrator, both the parties will nominate one person each as an arbitrator on their behalf. The two arbitrators nominated by the parties shall nominate one more person to act as third arbitrator or umpire.

The arbitrator or Arbitrators, as the case may be, shall have power to open up, review and revise any certificate, opinion, decision, requisition or notice, save in regard to the excepted matters, referred to in the preceding clause, and to determine all matters to dispute which shall be submitted to arbitration and of which notice shall have been given as aforesaid.

The venue of arbitration shall be Dehradun, India.

The arbitrator or Arbitrators, as the case may be, shall make his or their award within one year (or such further extended time as may be decided by him or them as the case may be with the consent of the parties) from the date of entering on the reference. In case during the arbitration proceedings the parties mutually settle or compromise their dispute or

difference, on the parties filing their joint memorandum of the settlement or compromise, the Arbitrator or the Arbitrators as the case may be, shall make an award in terms of such settlement or compromise.

Upon any such reference, the decision on the cost incidental to the reference and Award respectively shall be in the discretion of the arbitrator or Arbitrators as the case may be, who may determine the amount thereof or direct the same to be taxed as between the party and party, and shall direct by whom and to whom and in what manner the same shall be borne and paid.

This submission shall be deemed to be a submission to arbitration within the meaning of the Indian Arbitration and Conciliation Act, 1996 or any statutory modification thereof.

The award of the arbitrator or Arbitrators, as the case may be, shall be final and binding on the parties. It is agreed that the Contractor shall not delay the carrying out of the works by reason of any such matter, question or dispute being referred to arbitration, but shall proceed with the works with all due diligence and shall until the decision of the Arbitrator or Arbitrators, as the case may be, is given, abide by the decision of the Bank. No award of the Arbitrator or Arbitrators, as the case may be, shall relieve the Contractor of his obligations to adhere strictly to the Bank's instructions with regard to the actual carrying out of the works. The Employer and the Contractor hereby also agree that arbitration under this Clause shall be a condition precedent to any right of action under the Contract.

Right of technical scrutiny of final bill

36. The Employer shall have a right to cause a technical examination of the works and the final bill of the contractor including all supporting vouchers, abstracts, etc. to be made at the time of payment of the final bill. If as a result of this examination of otherwise any sum is found to have been overpaid or over certified it shall be lawful for the employer to recover the sum.

Employer entitled to cover compensation paid to workman

37. If, for any reason, the Employer is obliged, by virtue of the provisions of the Workmen's Compensation Act, 1923, or any statutory modification or re-enactment thereof to pay compensation to a workman employed by the Contractor in execution of the works, the Employer shall be entitled to recover from the Contractor the amount of compensation so paid, and without prejudice to the rights of the Employer under the said Act. The Employer shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by the Employer shall not be bound to contest any claim made against it under the said Act, except on the written request of the Contractor and upon his giving to the Employer full security to the satisfaction of the Employer for all costs for which the Employer might become liable in consequence of contesting such claim.

Abandonment of works

38. If at any time after the acceptance of the tender, the Employer shall for any reasons whatsoever not requires the whole or any part of the works to be carried out, the Bank shall give notice in writing to the Contractor who shall have no claim to any payment of compensation or other-wise whatsoever on account of any profit or advantage which he might have derived from the execution of the whole works.

Return of surplus materials

39. Notwithstanding anything to the contrary contained in any or all the clauses of this Contact, where any material for the execution of the Contract is procured with the assistance of the Employer by purchase made under orders or permits or licenses issued by Government, the Contractor shall hold the said materials economically and solely for the purpose of the Contract and not dispose of them without the prior written permission of the Employer and return it to the Employer, if required by the Employer, at the price to be determined by the Bank having due regard to the conditions of the materials, the price to be determined not be exceed the purchase price thereof inclusive of sales tax, octroi and other such levies paid by the Contractor in respect thereof, in the event of breach of the aforesaid condition, the Contractor shall in addition to being liable to action for contravention of the terms of licenses or permit and/or criminal breach of trust, be liable to Employer for all moneys, advantages or profits resulting or which in the usual course would have resulted to his by reason of such breach.

Right of employer to terminate contract in the event of death of Contractor or individual

40. Without prejudice to any of the rights or remedies under this Contract, if the Contractor, being an individual, dies, the Employer shall have the option of terminating the contract without incurring any liability for such termination.
41. **Non-disclosure Clause: -**

The Contractor shall not disclose directly or indirectly any information, materials and details of the Bank's infrastructure/systems/equipment etc., which may come to the possession or knowledge of the Contractor during the course of discharging its contractual obligations in connection with this agreement, to any third party and shall at all times hold the same in strictest confidence. The Contractor shall treat the details of the contract as private and confidential, except to the extent necessary to carry out the obligations under it or to comply with applicable laws. The Contractor shall not publish, permit to be published, or disclose any particulars of the works in any trade or technical paper or elsewhere without the previous written consent of the Employer. The Contractor shall indemnify the Employer for any loss suffered by the Employer as a result of disclosure of any confidential information. Failure to observe the above shall be treated as breach of

contract on the part of the Contractor and the Employer shall be entitled to claim damages and pursue legal remedies.

42. Sexual Harassment of women at work place

- a) The contractor shall be solely responsible for full compliance with the provisions of “the Sexual Harassment of women at work place (Prevention, Prohibition and Redressal) Act, 2013”. In case of any complaint of sexual harassment against its employee within the premises of the Bank, the complaint will be filed before the Internal Complaints Committee constituted by the contractor/Agency and the contractor.
- b) Any complaint of sexual harassment from any aggrieved employee of the Service Provider against any employee of the Bank or any employee of any other firm working in the Bank shall be taken cognizance of by the Regional Complaints Committee constituted by the Bank.
- c) The contractor shall be responsible for any monetary compensation that may need to be paid in case the incident involves the employees of the contractor, for instance any monetary relief to Bank’s employee or other firm’s employee, if sexual violence by the employee of the contractor is proved.
- d) The contractor shall be responsible for educating its employees about prevention of sexual harassment at work place and related issues.
- e) The contractor shall provide a complete and updated list of its employees who are deployed within the Bank’s premises.

Section VI

SPECIAL CONDITIONS

1. The workmen will not be allowed to stay within the premises.
2. The electric power required for the work can be drawn from the supply available at site free of cost.
3. Permission, if any, required from the local bodies shall be obtained by the Contractor.
4. The intending tenderer can obtain any clarifications regarding the Tender drawings, specifications etc. from the department on any Bank's working day
5. The tenderer may please note that, the work has to be carried out during the day time or as per the Bank's instructions. Therefore, the entire work involved shall be carried out with least disturbance to the staffs/occupants of the office and also day-to-day cleaning has to be done by the contractor. The wall/slab/column should be cut by chase cutter only
6. The contractor shall prepare three copies of **as done drawing** after completion of the work and shall submit along with the final bill.
7. The entire materials for the work shall be brought to the working area through the staircase and no freight lift will be available for lifting materials.
8. The debris/dust or any wastage generated out of the above work shall be cleaned as frequently as required and as instructed by the Bank's Engineer.
9. All dismantling work and work generating noise shall be done during the day time and holidays and day time work shall have to be done on restricted hours. Contractor has to made availability of supply during the Evening & night time. Contractor shall take into account the above facts while quoting the rates.
10. The tenderer shall remove all the debris collected at site (from the Bank's premises) on everyday basis. The staircase and passages used by the labours shall be cleaned properly, as per the entire satisfaction of Bank's Engineers.
11. The contractor shall depute qualified supervisor during execution of the work. No work shall be carried out at site in unsupervised manner
12. The tenderer shall use only approved brands of materials.

Section VII

APPENDIX HEREIN REFERRED

1.	Defects liability Period	12 months from the date of issue of virtual completion certificate.
2.	Period of final measurement	1 month from the date of final commissioning.
3.	Date of commencement	10th day from the date of award letter.
4.	Period of completion	6 weeks from the 10 th day of work order
5.	Liquidated Damages for delay in completing the work.	0.25 % of the cost of work executed per week subject to a maximum of 10% of the contract amount.
6.	Value of work for Interim Certificate for running bill	As per the payment terms and conditions
7.	Period of honoring interim certificate	1 month

Signature of Contractor

Section VIII

List of approved Makes

SI No.	Item	Approved make
1.	Batteries fire retardant casing	Panasonic/ Exide/ Amaron
2.	Power Cables	Polycab/CCI/Gloster/Finolex/universal

Size of UPS room will be approximately: 8.5 feet X 8.9 Feet.

Section IX

Tenders for Design, Supply, Installation, Testing and Commissioning of 2X20 KVA Uninterrupted Power Supply System in N+1 Parallel Redundant Mode at Bank's Office Building at Reserve Bank of India, Dehradun 248001

SPECIFICATION

System Description

1. The system shall consist of 2 Nos. True On-line UPS each of 20 KVA capacity and connected in (N+1) parallel mode. In case of additional power requirement in future, the increase in power should be possible by successively adding more UPS units in parallel to these UPS units without affecting the general operation of the system.
2. Each UPS shall be designed to operate as true on line double conversion and shall have galvanic isolation through the Isolation transformer of suitable capacity for meeting out UPS full load, losses of UPS and fully drained battery charging load etc.
3. Each UPS shall have separate enclosure/ cabinet.
4. **Each UPS shall have its own static switch, IGBT based rectifier/charger, and IGBT based inverter, based on digital signal processing technology (DSP) and the battery bank.**
5. Static bypass module shall ensure the instantaneous transfer of load to the bypass AC source input. Manual maintenance bypass switch shall isolate the UPS for maintenance and transfer the load to the bypass AC source input.
6. In case of malfunctioning of one of the UPS units, the defective UPS unit shall be isolated from the system automatically and the full load will be met with by the other healthy UPS unit.
7. In case of failure of both the UPS units due to internal faults the load shall be fed by the bypass mains automatically, provided the Mains voltage and frequency are within acceptable limits.
8. In case of excessive temporary over loads the system shall be designed to switch over to the bypass mains provided the Mains voltage and frequency are within acceptable limits. After removal of the temporary overload, the system shall automatically switch back to UPS mode from bypass mode.
9. **Each UPS shall have complete isolation facility by means of MCCBs/circuit breakers at battery bank, input and output both so that in the event of failure of one UPS, another UPS can be repaired without switching off the other UPS to ensure continuous output of the healthy UPS to the load.**
10. **Input and Output Power Supply arrangement:**

- i. The Bank shall provide Incoming Power Supply Switch/MCCB for each UPS unit and Output Load Panel for taking UPS power in the UPS Room.
- ii. The rate quoted for the UPS System shall also include for the following:
A closed IP 54 grade Common Paralleling Output Panel with tinned copper bus bar and a common output circuit breaker of required rating for paralleling each of the UPS outputs from their respective circuit breakers for taking a common output cable to the Bank's Output Load Panel.
- iii. Supply and connecting all UNINYVIN /PVC copper cables for full load of UPS from the Incoming MCCB to both the UPS Units and from each of the UPS outputs to the Common Paralleling Output Panel and then to the Bank's Output Load Panel. The cable shall be terminated properly with copper lugs as required. This also include UNINYVIN copper cable UPS to battery racks.

11. Earthing:

The Bank shall provide the earth point in the UPS room. The rate quoted for UPS System shall also include for supply and connecting the copper earth conductor of required capacity from the existing earth point to the various equipment of the UPS system such as UPS Units, Common Paralleling Output Panel, Battery rack etc.

12. Technical Specifications of each unit of UPS

	Technology		
A	Input	:	
	Rectifier		IGBT based PWM Rectifier
1.	Voltage	:	400 volts \pm 15%, 3 Phase and neutral
2.	Frequency	:	50 Hz \pm 6%
3.	Input Power Factor	:	> 0.99
4.	Current Harmonics THDi	:	\leq 3%
5.	Rectifier DC Voltage Ripple at the battery bank		<1%
6.	Rectifier capacity		Rectifier should be able to charge the battery banks in fully discharged condition and also supply power in full load condition in normal operation
B	Output	:	
	Inverter		IGBT based PWM Inverter
1.	Voltage	:	400 volts \pm 1%

2.	Frequency	:	50Hz \pm 1%
3.	Distribution	:	3 Phase, Neutral (4 wire system)
4.	Capacity of each UPS module	:	20 KVA of each unit
5.	Overload	:	125% for 10 minutes 150% for 60 seconds
6.	Voltage Regulation	:	
	Static regulation	(a)	\pm 1% during steady state condition
	Dynamic regulation	(b)	Not to exceed 5% when load equivalent to 100% of the total capacity is cut in or cut out.
7.	Recovery time	:	Less than 20 milliseconds in all the above conditions.
8.	Output voltage Wave Form	:	Sinusoidal
9.	Output voltage Distortion with 100% linear load	:	< 1%
	Voltage THD at 100% Nonlinear load		\leq 3%
10.	Crest factor		3:1
11.	Load power factor	:	0.9 lagging. The UPS and the battery bank should be designed based on this load power factor.
13.	No Load Loss including isolation transformer	:	Should not exceed 4% of the rated capacity
14.	Minimum Overall Efficiency in true online double conversion mode (AC to AC including isolation transformer and without battery bank)	:	At 100% of rated capacity at 0.9 lag pf –92% At 75% of rated capacity at 0.9 lag pf – 92% At 50% of rated capacity at 0.9 lag pf – 91% At 25% of rated capacity of 0.9 lag pf –90%

C Features to be provided

1. Manual maintenance bypass
2. Static bypass switch without interruption of output supply
3. Emergency Trip to trip entire UPS
(Input to the UPS, Batteries, output of the UPS and bypass shall be disconnected with the help of breakers on activation of Emergency Trip)
4. Output voltage adjustment for \pm 15 volts
5. **Battery circuit breaker for each Battery bank**
6. **Galvanic isolation for neutral:** Isolation transformer of suitable capacity must be provided in the system externally on the input side.
7. **Reverse phase sequence protection-** Reverse phase sequence protection for each UPS, shall be capable of correcting the input phase sequence and the UPS shall not go to Battery mode under such condition
8. On line temperature display
9. On line battery monitoring & battery alert

D Alarm Indication /Trips

1. Output frequency error
2. Output voltage error
3. Load on mains
4. Load on batteries
5. Battery voltage low
6. Low input frequency
7. Equipment over temperature
8. Equipment overload
9. Ventilation fan failure
10. Battery output breaker open

E LCD

Display shall be able to provide the following measurement option

i. Voltage –

- Input Converter (1-2-3 Phase / Neutral)
- Input bypass (1-2-3 Phase / Neutral)
- UPS output (1-2-3 Phase / Neutral)
- Battery

ii. Current –

- UPS input (Phase 1-2-3)
- UPS output (Phase 1-2-3)
- Battery charging / discharging

iii. Frequency

- UPS Input
- UPS Output

iv. Battery

- Remaining back-up time (in minutes) capacity

v. Power

- UPS active output (Phase 1-2-3)

UPS output (Reactive)
UPS load %(Phase 1-2-3)

F Environmental conditions

1. Ambient temperature : 0 deg. C to 40 deg. C
2. Ambient Relative Humidity : 0-95% non-condensing
3. Room Cooling : Natural / Exhaust
4. Equipment Cooling : Shall be done by means of a number of suitable capacity exhaust fans.

G Protection

1. Fast acting semiconductor fuses
2. Current limiting features
3. Suitable protection for DC filter capacitors
4. Protection for control circuits
5. Inverter tripping without fuse failure on output short circuit

H Enclosure

Cable Entry : Top / Bottom /side

I Noise level

: Not to exceed 70 DBA (to be measured 1 meter away from the body of UPS)

J Communication features:

The UPS shall have the following features:

1. RS 232 /485 serial port
2. LAN Connectivity interface SNMP port to monitor the UPS using LAN .

K Battery Back-up

- i. **Battery Bank** : The battery bank shall consist of required number of 12 volts Valve Regulated Lead Acid (VRLA) with Fire Retardant casing, Sealed Maintenance Free (SMF) batteries of required Ampere Hour capacity to meet the backup requirement.
- ii. The rack of the Battery Bank shall be made of MS angle framework of adequate size and strength to accommodate all the required batteries of each UPS and shall have suitable clearance for ventilation and maintenance of batteries. The rack shall be powder coated. The interconnection of battery shall be with single core PVC insulated fire retardant copper cables of suitable size and capacity with necessary terminal blocks, nuts bolts etc. and all the cable shall be dressed in a neat manner. The suitable capacity MCCB shall be mounted outside the rack to isolate the battery bank in case of emergency or during maintenance.
- iii. **Each of 2 UPS units shall have separate battery bank with back up of 30 minutes each for 20 KVA at 0.9 Lag Power Factor with required number of batteries, with battery inter-connection, jumper cables and**

terminal connectors etc.

- iv. To substantiate the selection of number and size of batteries, the detailed calculations shall be furnished along with the selection chart/graph. The end cell voltage after discharge of batteries shall not be less than 1.75 Volts.

L Advance Battery Management

- i. To prolong the battery life, the UPS shall be provided with temperature – compensated battery charging and protection against over-charging of battery. Protection against deep discharge of batteries shall be incorporated
- ii. The UPS shall have an arrangement for on-line battery testing periodically and alert messages/indications should be generated in case of any abnormality in the battery bank parameters.

M UPS Acceptance testing:

The UPS units shall be tested at factory/contractor's premises with 0.9 pf load as per design by the Bank's engineer, before delivery to confirm the technical specifications furnished by the bidder as per the details of the tests mentioned in the tender. Before offering the UPS for acceptance testing, the bidder/OEM should test the UPS as per the detailed tests indicated in the tender and forward the test report in the format provided in the tender for Bank's examination. The test results will be further confirmed/verified during the acceptance testing by Bank's engineer.

In case the firm provides only resistive load, current corresponding to rated load in KW at 0.9 pf (at 100%, at 75%, at 50% & at 25%) should be passed through the UPS system by providing required amount of resistive load and efficiency may be computed.

Tenderers may please note that the UPS system not found to be conforming to the technical specifications set out/accepted in the tender, during the above testing, is liable to be rejected.

N Remote Indication Panel

- i. The remote indication panel must indicate Load on Mains, Load on Battery, Load on by-pass
- ii. Audio and visual alarm should be provided with reset/acknowledgement facility when UPS switches over to battery / bypass mode.
- iii. The scope of work includes the wiring / necessary cabling laid in suitable size PVC conduit to connect the indication panel with UPS upto 100 meters

Section X

Tender for Design, Supply, Installation, Testing and Commissioning of 2X20 KVA Uninterrupted Power Supply System in N+1 Parallel Redundant Mode at Bank's Office Building at Reserve Bank of India, Dehradun 248001

Technical Details (to be furnished by the bidders)

S.No.	Particulars	Bank's requirements	Technical Information to be furnished by bidder
A	Capacity of each UPS in KVA	20 KVA	
B	Make and Model of UPS		
C	Type of signal processing	Digital Signal Processing(DSP) Technology	Yes/No
D	Whether each UPS of above mentioned capacity can be connected in parallel in N+1 Mode	To be connected in parallel in N+1 mode	Yes/No
E	Isolation Transformer	To be provided on input side externally	Yes/No
	Core and Windings	Isolation transformer must be CRGO core based and have copper windings	
F	Input		
1	Rectifier technology	IGBT Based PWM	
2	Rectifier capacity	Rectifier should be able to charge the battery banks in fully discharged condition and also supply power in full load condition	Yes/No

3	DC Voltage ripple at battery bank	< 1%	
4	Rated voltage	400 volts 3 phase 50 Hz	
5	Voltage tolerance	$\pm 15\%$	
6	Rated frequency	50 Hz	
7	Frequency tolerance	± 3 Hz	
8	Input Power factor	>0.99	
9	Input Current Harmonics THDI	<=3%	
G	Output		
1	Inverter Technology	IGBT based PWM Inverter	
2	Rated voltage	400 volts 3 phase and neutral	
3	Voltage tolerance	$\pm 1\%$	
4	Voltage regulation	$\pm 1\%$ under steady state condition	
		\pm Not to exceed $\pm 5\%$ when load equivalent to 100% of the total capacity is cut in or cut out	
5	Recovery time	<20 millisecond	
6	Rated Frequency	50 Hz	
7	Frequency tolerance	± 0.5 Hz	
8	Overload capacity	125 % of rated capacity for 10 Min	
		150 % of rated capacity for 60 sec	
H	Overall efficiency with isolation transformer and without battery Bank		
1.	At 100% rated capacity at 0.9 lag pf	92%	
2.	At 75% rated capacity at 0.9 lag pf	92%	
3.	At 50% rated capacity at 0.9 lag Pf	91%	

4.	At 25% rated capacity at 0.9 lag pf	90%	
I	No load loss	Less than 4 % of rated capacity	
J	Wave form		
1.	Wave form	Sinusoidal	
2.	Output voltage Harmonic distortion		
	a. With Linear load	1%	
	b. With Nonlinear load	3%	
3.	Crest factor	3:1	
K	Battery backup		
1.	Make of the batteries	Panasonic/ Exide/ Amraron	
2.	Type of the Batteries	SMF and Fire retardant casing	
3.	Voltage of each battery bank	As per design	
4.	Amp Hour rating of each battery	As per design	
5	VAH of each battery bank	As per design (including isolation transformer losses)	
6	Total number of batteries for each battery bank for 30 Minutes backup	As per design	
L	Features Offered		
1.		Manual by pass switch	
2.	Static bypass	To be provided for individual UPS module	Yes/No
	Capacity of Static Bypass	Minimum 200% temporary overload capacity	Provide details
3	Manual bypass	To be provided for individual UPS module	Yes/No
4	Emergency Trip	To trip entire UPS including the Rectifier, inverter and battery breakers and Bypass	Yes/No
5.	Output voltage adjustment	± 15 volts	Yes/No

6.	Battery circuit breaker	To be provided on Rack of Battery Bank	Yes/No
7.	Galvanic isolation for neutral	Isolation transformer to be provided	Yes/No
8.	Reverse phase sequence Protection and correction	To be provided	Yes/No
9.	On line temperature display	To be provided	Yes/No
10.	On line battery monitoring & battery alert	To be provided	Yes/No
M	Alarm Indication and Trips		
1.	Output frequency error	To be provided	Yes/No
2.	Output voltage error	To be provided	Yes/No
3.	Load on mains	To be provided	Yes/No
4.	Load on batteries	To be provided	Yes/No
5.	Battery voltage low	To be provided	Yes/No
6.	Low input Frequency	To be provided	Yes/No
7.	Equipment over temperature	To be provided	Yes/No
8.	Equipment Overload	To be provided	Yes/No
9.	Ventilation fan failure	To be provided	Yes/No
10.	Battery output breaker open	To be provided	Yes/No
N	LCD		
i	Display shall be able to provide the following measurement option		
ii	Voltage – Input Rectifier (1-2-3 Phase / Neutral) Input by pass (1-2-3 Phase / Neutral)		Yes/No

	UPS output (1-2-3 Phase / Neutral) Battery		
iii.	<u>Current –</u> UPS input (Phase 1-2-3) UPS output (Phase 1-2-3) Battery charging / discharging		Yes/No
iv	<u>Frequency –</u> UPS Input UPS Output		Yes/No
v.	<u>Battery –</u> Remaining back-up time (in minutes) capacity		Yes/No
	<u>Power</u> UPS active output (Phase 1-2-3) UPS output (Reactive) UPS load % (Phase 1-2-3)		Yes/No
O	Ambient temperature	:	0 deg. C to 40 deg. C
P	Ambient Relative Humidity	:	0-95% non-condensing
Q.	Room Cooling	:	Natural / Exhaust
R	Equipment Cooling	:	Shall be done by means a number of suitable capacity exhaust fans.
S	Protection		
1.	Fast acting semiconductor fuses		
2.	Current limiting features		
3.	Suitable protection for DC filter capacitors		
4.	HRC fuses for control circuits		
5.	Inverter tripping without fuse failure on output short circuit		
T	Noise level at 1 meter		
	:		

U	Communication features:		
	The UPS shall have the following features: 1. RS 232 /485 serial port 2. LAN Connectivity interface		
V	Advance Battery Management		
(a)	To prolong the battery life, the UPS shall be provided with temperature compensated battery charging, with protection against overcharging of battery. Protection against deep discharge of batteries shall be incorporated.		
(b)	The UPS shall have an arrangement for on-line battery testing periodically. In case of failure of battery, the UPS will go to normal mode and failure signals (visual & audio) shall be raised.		
W	Remote Indication Panel		
	The remote indication panel must have indication for Load on Mains, Load on Battery, Load on By pass.		
	Audio and visual alarm should be provided with reset/ack. facility when UPS switches over to battery / bypass mode.		
X	(i) Response time	Time to attend to complaint (four hours)	
	(ii) Penalty	Rs.500/- per day if rectification of defects developed in the system is not done in four hours.	
Y	Software details		
Z	Latest Testing standard followed		
AA	Whether the contractor can supply additional units of the same UPS in next 5 years	Yes/No	
AB	Whether the additional	Yes/No	

	units of the UPS of same capacity can be connected in parallel to this offered UPS System	
--	---	--

AC	Physical details		
1.	UPS cubicle	Height (mm)	
		Length (mm)	
		Depth (mm)	
		Weight (Kg)	
2.	Battery Rack	Height (mm)	
		Length (mm)	
		Depth (mm)	

Testing facility		Details to be furnished by the bidder
1	Please confirm whether the contractor is having the testing facility at their premises/factory to carry out all the tests as mentioned in the tender and ready to carry out the tests along with the same Battery Banks which shall be supplied to the Bank	Yes/No
2	Digital storage oscilloscope	Make and MHz
3	Digital 3 phase power analyser	Make and model
4	Digital multimeter	Make and model
5	Calibration certificate & traceability (in-house or external agency – as applicable).	Yes/No
6	Facility for i/p voltage variation from -15% to +15% (400V nominal) at full load for desired KVA rating	Yes/No
7	Facility for input frequency variation from 47 Hz to 53 Hz (50Hz nominal) at full load for desired KVA rating	Yes/No
8	Load Bank of desired rating.	Yes/No

Section XI

Testing of UPS System

UPS under testing: 2x 20 KVA UPS system in (N+1) Parallel Redundant Configuration.

Make of UPS system:

Model of the UPS:

Sr. No. of the UPS1 and UPS2: _____

Details of Instruments used for testing:

Type	Make	Model	Calibrated on date
Power Analyzer			
Multi-meter			
Storage type CRO			

The UPS System shall be tested before delivery at site and the following tests shall be performed.

- 1. Input voltage variation test** at rated load condition (at resistive load of required KW). Vary the input voltage to the UPS and note the readings.

The parameters recorded are: input voltage, input current, DC Voltage, DC Current, output voltage, output current, output waveform distortion and RMS ripple on battery terminal

Input Voltage	Output voltage	Output Voltage Harmonics	Ripple at Battery terminal
340 V			
400 V			
460V			

This test shall give following result:

- Output voltage Range-** Output voltage should be 400+/- 1 % over the entire range of input voltage (340 Volt to 460 Volts)
- Output voltage waveform distortion over entire range at linear load.** (For this test the battery is not connected at Battery terminal.)
- Ripples at battery terminal

2. Measurement of input power factor, input current harmonic distortion & efficiency:

- a. The input voltage is kept nominal i.e. 400V.
- b. Rated load is connected at the output
- c. The parameters measured are input power, input current, input voltage, input power factor, input current harmonic distortion, output power, output voltage, output frequency, output waveform distortion and DC Voltage and DC Current (for this test also battery is not connected at battery terminal).

This test shall give:

- i. **Input power factor** (should be better than 0.99)
- ii. Input current harmonic distortion THDI
- iii. **Over all AC to AC efficiency at 100% load**

3. Output wave form distortion test on non-linear load (rectifier type load).

- a. Keep input voltage nominal. Connect Non-linear load (rectifier load)
- b. Measure output wave form distortion for output voltage & output current

This result shall give:

The output voltage wave form distortion on non-linear load.

4. Transient response test:

- a. Connect rated resistive load. Keep input voltage nominal. Connect digital storage oscilloscope/power analyser at UPS output.
- b. Apply 0 to 100% step load of rated capacity, the output waveform condition at that point is to be measured.
- c. Measure the difference between the output waveform peak value before and after the application of load.
- d. Calculate the recovery time and percentage dip in output voltage.

This test shall give UPS capability to cater to transient load conditions.

5. Unsurpassed Short Circuit Handling capacity test:

This test shall ensure that the UPS has a power to clear the branch circuit fuse of 20% rating without whole UPS getting tripped in the event of short circuit occurring at one of the branch circuits.

- a. Carefully connect the HRC fuse/MCB of rating with 20% of the UPS rating at the output of the UPS through MCCB.
- b. Short the UPS output through HRC fuse/MCB. And note the results. Fuse should blow or MCB should trip without tripping of UPS.

6. Output dead circuit test.

This test shall ensure UPS has capability to face dead short circuit condition without creating any damage within itself.

- a. Keep input voltage nominal. Ensure UPS is working in normal mode.
- b. Measure output voltage at UPS output.
- c. Carefully create a dead short circuit condition at UPS output through MCCB
- d. Put ON the MCCB. The UPS output will be sorted through link directly. The UPS should trip due to short circuit protection of the UPS without any damage to UPS
- e. Put OFF MCCB thereby removing short circuit at the UPS output.
- f. Reset the fault condition in UPS and the UPS should restart again giving normal output without any problem.

7. Test for parallel redundant.

- a. Connect rated load at UPS output and check output current sharing between two UPSs, it should be equal.

CURRENT	UPS-1	UPS-2
R-Phase		
Y-Phase		
B-Phase		

- b. Check transfer of load from UPS 1 to UPS 2 in event of failure of any one of the UPS. It should not cause any break to the load, which can be observed on digital storage oscilloscope.
- c. Check the transfer of load to bypass when both the UPS fail or trip.

The transfer and re-transfer of load should be smooth without any interruption of the load.

8. Efficiency Test

Connect the rated 0.9 pf lag load and note down the Input KW and Output KW of the UPS by using 3 phase power analyser. Ensure that the Isolation transformer is also

connected. In case the firm provides only resistive load, current corresponding to rated load in Kw at 0.9 pf lag(at 100%, at 75%, at 50% & at 25%) should be passed through the UPS system by providing required amount of resistive load and efficiency may be computed.

Load on UPS	Actual Input KW	Output KW	Tested Efficiency	Committed efficiency	Observation
100% load at 0.9 PF					
75% load at 0.9 PF					
50% load at 0.9 PF					
25% load at 0.9 PF					

NOTE:

Example of efficiency computation with 20 KVA UPS designed at 0.9 pf load but tested with resistive load:

UPS Design

KVA: 20

KW: 18 Kw(20x0.9)

Full load current: $(20 \times 1000) / (1.732 \times 400) = 28.87$ amps at 100%, 21.65 amps at 75%, 14.43 amps at 50% and 7.22 amps at 25%. Efficiencies may be computed by passing these currents and complied with Bank’s efficiency requirements.

9. Overload Test

- a. **125% Overload:** Connect the 125% of the rated resistive load and observe. The UPS should continue to provide the output without any tripping etc. for 10 Minutes.
- b. **150% Overload:** Connect the 150% of the rated resistive load and observe. The UPS should continue to provide the output without any tripping etc. for 1 Minute.

10. No Load Losses Test

Note the power input of the UPS when no load is connected at the output and without battery and compare with the specifications.

11. Output Voltage Regulation (at 100% Load):

Output Voltage at No Load (Vnl):__Volts

Output Voltage at 100% load.(Vfl):__Volts

Voltage Regulation: $((V_{nl} - V_{fl})/V_{nl}) * 100 = \underline{\hspace{2cm}}\%$

12. Testing of input Frequency Range at no load: Vary the input frequency from 47 Hz to 53 Hz while keeping the batteries OFF and observe the output voltage frequency. It should be within 49.5 to 50.5 Hz.

13. Battery Backup Capacity Test:

Details of battery Bank:

1. Number of Batteries:
 2. AH of each Battery:
 3. Make of batteries:
 4. Desired Back up time:
 5. Rated resistive load in KW:
- a. Note down the initial charged voltage of each battery before start of battery discharge.
 - b. Connect the rated resistive load on the UPS before start discharging the batteries and note down
 - c. Start discharging the batteries and note the reading at the gap of 3 minutes
 - d. The tripping voltage of the battery bank should be equal to **1.75 x 6 x No. of batteries.**

Time	Battery Bank Voltage	Connected load in KW	Battery Discharge current	Observation

14. RS232/485 and SNMP Communication Port: Availability of the same to be checked and verified.

15. On Line Battery Testing: Availability of the same to be checked and verified.

16. Auto Restart Test: The Mains should be switched on after the batteries are completely drained to check the auto restart feature of the UPS. The UPS should come back in normal operation after resumption of the power supply.

17. Protections: Note the details of current and voltage.

18. Emergency trip: Test with the help of Emergency Push Button, confirm the tripping of Battery circuit breaker, rectifier input and inverter output breaker and Bypass

section isolation as set out in the Technical specifications.

- 19. **AC input Failure Test:** Switch off the input supply & Load shall be shifted to battery without Interruption (Record the load transfer Waveform).
- 20. **AC input Return Test:** Switch on the input supply & Load shall be shifted to Rectifier without Interruption (Record the load transfer Waveform).
- 21. **Phase Reversal Test:** The Phase sequence of input may be altered and functioning of UPS on main supply may be ensured.
- 22. **Heat Run Test at Full Load:** Each UPS to be tested on rated load at 0.9 pf lag for 4 hours. In case the testing is done with resistive load for the rated KW, the firm shall provide manufacturer's test certificate to establish the temperature rise under 0.9 lag load conditions for the rated KW in addition to heat run test conducted for 4 hours with resistive load.

PARAMETER	UPS-1	UPS2	Remarks on temperature rise
Starting Time;			
Finish Time			
Output KW			

- 23. **Remote Indication Panel Test:** This is to be tested for various indications and alarms as per specifications
- 24. Any other test as required to check and verify the specifications schedule

Section XII

Tender for Design, Supply, Installation, Testing and commissioning of 2X20 KVA Uninterrupted Power Supply System of Bank's Office Building at Reserve Bank of India, Dehradun 248001

Unpriced Schedule of Quantities of proposed UPS system

Sr. No.	Description	Qty.
1.	<p>Design, Supply, installation, testing and commissioning of 2 Nos. True On line UPS, each of 20 KVA capacity connected in (N+1) parallel redundant mode with capability to connect more UPS units of same capacity in parallel including circuit breakers, Common Paralleling bus bar panel, isolation transformers, inter-connecting cables, Copper earth conductors etc.as per detailed specifications.</p> <p>The rate shall also include for packing and forwarding charges, all taxes GST and duties as applicable and insurance charges for Contractor All Risk Policy including fire for supply, transit, storage, erection testing and commissioning etc., Workmen compensation policy and third-Party Liability policy as per terms and conditions and valid till virtual completion.</p> <p>The rate shall include for supply of software including loading in the PC to be provided by the Bank and showing the performance.</p>	1 set.
2.	<p>Supply, installation, testing and commissioning of each battery bank for 30 Minutes backup for 20 KVA load (on each bank) at 0.9 Power factor as specified including battery circuit breaker, battery Rack, interconnecting cables from battery to battery and from UPS to Battery Bank and all other materials as required and initial charging (including packing and forwarding charges, all taxes GST and duties as applicable and insurance charges for Contractor All Risk Policy including fire for supply, transit, storage, erection testing and commissioning etc., Workmen compensation policy and third Party Liability policy as per terms and conditions and valid till virtual completion.)</p>	2 sets.
3	<p>All-inclusive comprehensive annual maintenance service contract charges for the UPS system as in item No. 1 and 2 above (excluding replacement cost of batteries after warranty period) as per terms and conditions. The rate shall also include for all taxes GST and duties etc. as applicable.</p>	1 set

List of Clients

Details of similar qualifying works executed during the last 5 years

Sr. No.	Name and address of the firm	No. of units supplied	Value of the work	Whether works completed in time or not (give date of start & date of completion)	Completion period as per work order	Fax /phone number &contact person of the firm

(Attach TDS certificate in case of private companies)

Date

Signature of Tenderer:

CLIENT's CERTIFICATE REG. PERFORMANCE OF CONTRACTOR

Name & address of the Client

Details of Works executed by M/s

- | | | |
|----|---|--|
| 1 | Name of work with brief particulars | |
| 2 | Agreement No. and date | |
| 3 | Agreement amount | |
| 4 | Date of commencement of work | |
| 5 | Stipulated date of completion | |
| 6 | Actual date of completion | |
| 7 | Details of compensation levied for delay (indicate amount) if any | |
| 8 | Gross amount of the work completed and paid | |
| 9 | Name and address of the authority under whom works executed | |
| 10 | Whether the contractor employed qualified Engineer/Overseer during execution of work? | |
| 11 | i) Quality of work (indicate grading) | Outstanding/Very Good/
Good/Satisfactory/poor |
| | ii) Amt. of work paid on reduced rates, if any. | |
| 12 | i) Did the contractor go for arbitration? | |
| | ii) If yes, total amount of claim | |
| | iii) Total amount awarded | |
| 13 | Comments on the capabilities of the contractor. | |
| | a) Technical proficiency | Outstanding/Very Good/
Good/Satisfactory/poor |
| | b) Financial soundness | Outstanding/Very Good/
Good/Satisfactory/poor |
| | c) Mobilization of adequate T&P | Outstanding/Very Good/
Good/Satisfactory/poor |
| | d) Mobilization of manpower | Outstanding/Very Good/
Good/Satisfactory/poor |
| | e) General behaviour | Outstanding/Very Good/
Good/Satisfactory/poor |

Note : All columns should be filled in properly countersigned”

*

Reporting Officer* with Office seal

*Officer of the rank of executive engineer/Superintending Engineer or equivalent

Proforma of Bank Guarantee for Security Deposit

(To be submitted on Non-judicial stamp paper of appropriate value purchased in the name of the issuing bank)

No. _____ Date _____

To:
The Regional Director,
Reserve Bank of India,
74/1, Rajpur Road
Dehradun-248001

Dear Sir

In consideration of your agreeing to accept the security deposit of INR ____ (INR ____ only) furnish able to you by Messer _____ (hereinafter referred to as “the Contractor”) in terms of their contract with you for **Design, Supply, Installation, Testing and Commissioning of 2X20 KVA Uninterrupted Power Supply System in N+1 Parallel Redundant Mode at Reserve Bank of India, Dehradun** I as per their Tender dated _____ and your Special Conditions of Contract and other tender documents relating thereto subject to the conditions and alterations mutually agreed upon the set forth or referred to in your Contract dated _____ in the form of guarantee from us in the manner hereinafter contained, we _____ (Name of the Bank) do hereby covenant and agree with you as follows :

1. We undertake to indemnify you and keep you indemnified from time to time to the extent of INR ____ INR(____ only) against any loss or damage caused to or suffered by or that may be caused to or suffered by you by reason of any breach or breaches on the part of the Contractor of any of the terms and conditions contained in the said Contract and in the event of the Contractor making any default or default in carrying out any of the work under the said Contract or otherwise in the observance and performance of any of the terms and conditions relating thereto in accordance with the true intent and meaning thereof, we shall forthwith on demand pay to you such sum or sums not exceeding in total the said sum of INR _____ (INR _____ only) as may be claimed by you as your losses and/or damages, costs, charges or expenses by reason of such default on the part of the Contractor.
3. Notwithstanding anything to the contrary, your decision as to whether the Contractor has made any such default or defaults and the amount or amounts to which you are entitled by reasons thereof will be binding on us and we shall not be entitled to ask you to establish your claim or claims under this Guarantee but will pay the same forthwith on your demand without any protest or demur.
4. This guarantee shall continue and hold good until it is released by you on the application by the Contractor after expiry of the relative guarantee period of the said Contract and after the contractor had discharged all his obligations

under the said Contract and produced a certificate of due completion of the work under the said contract and submitted a "No Demand Certificate", provided always that this guarantee shall in no event remain in force after the day of _____ without prejudice to your claim or claims arisen and demanded from or otherwise notified to us in writing before the expiry of six months from the said date which will be enforceable against us notwithstanding that the same is or are enforced after the said date.

4. Should it be necessary to extend this guarantee on account of any reason whatsoever, we undertake to extend the period of this Guarantee on your request till such time as may be required by you. Your decision in this respect shall be final and binding on us.
5. You will have the fullest liberty without effecting this guarantee from time to time to vary any of the terms and conditions of the said contract or extend the time of performance of the Contractor or to postpone for any time or from time to time any of your rights or powers against the Contractor and either to enforce or forbear to enforce any of the terms and conditions of the said Contract and we shall not be released from our liability under this guarantee by the exercise of your liberty with reference to matters aforesaid or by reason of any time being given to the Contractor or any other forbearance, act or omission on your part or any indulgence by you to the Contractor or by any variation or modification of the said contract or any other act, matter or things whatsoever, which under the law relating to sureties would but for the provisions hereof have the effect of so releasing us from our liability hereunder provided always that nothing herein contained will enlarge our liability hereunder beyond the limit of INR _____ (INR _____ only) as aforesaid.
6. This guarantee shall not in any way be affected by your taking or varying or giving up any securities from the Contractor or any other person, firm or company on its behalf or by the winding up, dissolution, insolvency or death as the case may be, of the Contractor.
7. In order to give full effect to the guarantee herein contained you shall be entitled to act as if we were your Regional Director debtors in respect of all your claims against the Contractor hereby guaranteed by us as aforesaid and we hereby expressly waive all our rights of surety-ship and other rights, if any, which are in any way inconsistent with any of the provisions of this guarantee.
8. Subject to the maximum limit of our liability as aforesaid, this guarantee will cover all your claim or claims against the contractor from time to time arising out of or in relation to the said contract and in respect of which your claim in writing is lodged on us before expiry of six months from the date of expiry of this guarantee.
9. Any notice by way of demand or otherwise hereunder may be sent by special courier, telex, fax or registered post to our local address as aforesaid and if sent by post, it shall be deemed to have been given when the same has been posted.
10. This guarantee and the powers and provisions herein contained are in addition to and not by way of limitation of or substitution for any other guarantee or guarantees heretofore given to you by us (whether jointly with others or alone) and now existing un cancelled and that this guarantee is not intended to and shall not revoke or limit such guarantee or guarantees.
11. This guarantee shall not be affected by any change in the constitution of the contractor or us nor shall it be affected by any change in your constitution or by any amalgamation or absorption thereof or therewith but will ensure to the

benefit of and be available to and enforceable by the absorbing or amalgamated company or concern.

12. Any forbearance, act or omission on the part of the Bank in enforcing any of the conditions of the said tender or showing of any indulgence by the Bank to the Tenderer shall not discharge the Surety in any way and the obligations of the Surety under this guarantee shall be discharged only on the intimation thereof being given to the Surety by the Bank.
13. This guarantee is irrevocable during the period of its currency and shall not be revoked without your previous consent in writing.
14. We further agree and undertake to pay you without demur the amount demanded by you in writing notwithstanding any difference or dispute or controversy that may exist or arise between you and contractor or any other person.
15. Notwithstanding anything contained herein above our liability under this guarantee is restricted to INR _____ (INR _____ only). Unless a written claim is lodged on us for payment under this guarantee within six months from the date of expiry, including extensions if any, of this guarantee all your rights under the guarantee shall be forfeited and we shall be deemed to have been released and discharged from all liabilities there under, irrespective of whether or not the original guarantee is returned to us.
16. We have power to issue this guarantee in your favour under the Memorandum and Articles of Association of our Bank and the undersigned has full power to execute this Guarantee under the Power of Attorney granted to him by the Bank.

SIGNED AND DELIVERED

(For & on behalf of the above-named Bank)

For & on behalf of

(Banker's Name & Seal)

BRANCH MANAGER

(Banker's Seal)

Address _____

Articles of Agreement

Articles of Agreement

ARTICLES of Agreement made on the ----- day of -----
 --- between the Reserve Bank of India, having its Central Office at Mumbai
 (hereinafter called "The Employer") of the one part and -----
 (hereinafter called "The Contractor") of the other part.

Whereas the employer is desirous of doing the work of **Design, Supply, Installation, Testing and Commissioning of 2X20 KVA Uninterrupted Power Supply System in N+1 Parallel Redundant Mode at Reserve Bank of India, Dehradun** and whereas the said drawings and the specifications and the Schedule of Quantities have been signed by or on behalf of the parties hereto.

And Whereas the Contractor has agreed to execute upon and subject to the conditions set forth in the Conditions and in the Schedule of Quantities and Conditions of Contract (all of which are collectively hereinafter referred to as "the said Conditions") the works shown upon the said drawings and/or described in the said Specifications and included in the said Schedule of Quantities at the respective rates therein set forth amounting to the payable there under (hereinafter referred to as "the said Contract Amount").

NOW IT IS HEREBY AGREED AS FOLLOWS:

1. In consideration of the said Contract Amount to be paid at the time and in the manner set forth in the said Conditions, the Contractor shall upon and subject to the said Conditions execute and complete the work described in the said Specifications and the Schedule of quantities.
2. The Employer shall pay the Contractor the said Contract amount or such other sum as shall become payable, at the times and in the manner specified in the said Conditions.
3. The said conditions and Appendix thereto and the correspondence attached hereto shall be read and construed as forming part of this Agreement and the parties hereto shall respectively abide by and submit themselves to the said Conditions and the correspondence and perform the agreement on their part respectively in the said Conditions and the correspondence contained.
4. The plans, agreement and documents mentioned herein shall form the basis of this contract.
5. This Contract is an item rate contract to be paid for according to the completion of work as contained in Schedule of Quantities or as provided in the said conditions and all as per specifications and working drawings.
6. The contractor shall afford every reasonable facility for carrying out of all works of other Contractors appointed by the Employer and shall make good any damages done to walls, floors etc. after the completion of such works.
7. Time shall be considered as the essence of this Contract and the Contractor hereby agrees to commence the work/job from the 10th day of issue of formal

work order as provided for in the said conditions and to complete the entire work specified within **6 weeks** subject to nevertheless to the provisions for extension of time.

8. All payments by the Employer under this Contract will be made only at Dehradun.
9. All disputes arising out of or in any way connected with this Agreement shall be deemed to have arisen at Dehradun and only Courts in Dehradun shall have the jurisdiction to determine the same.
10. That the several parts of this contract have been read by the Contractor and fully understood by the Contractor.
11. The contractor is bound to abide by the provision of payment of wages Act 1936 and minimum wages Act 1948. The Bank reserves the right to pay the minimum wages to worker by deducting appropriate amount from liability to contractor, in case minimum wages are not paid.

IN WITNESS WHEREOF the Employer and the Contractor have set their respective hands to these presents and two duplicates hereof the day and year first herein above written.

(If the Contractor is a partnership or an individual)

IN WITNESS WHEREOF the Employer has set its hands to these presents through its duly authorized official and the Contractor has caused its common seal to be affixed hereunto and the said two duplicates has caused these presents and the said two duplicates hereof to be executed on its behalf, the day and year first herein above written.

If the Contractor is a Partnership
or an Individual

IN WITNESS WHEREOF The Bank and the Contractor have set their respective hands to these presents and two duplicate hereof the day and year first hereinabove written.

If the Contractor is a Company

IN WITNESS WHEREOF The Bank has set its hand to these presents through its duly authorised official and the Contractor has caused its common seal to be affixed hereunto and the said two duplicate/has caused these presents and the said two duplicates hereof to be executed on its behalf, the day and year first hereinabove written.

Signature Clause

SIGNED AND DELIVERED by the Reserve Bank of India by the hand of
Shri

(Name and designation)

.....
..... in the presence of

(1)
Address

(2)
Address

.....
.....
.....

Witnesses

SIGNED AND DELIVERED BY If the part is a partnership firm or any individual should be signed by all or on behalf of all the partners.

..... 1).....
..... Address

.....
.....

2)
.....

..
Address

.....
.....

..

If the Contractor signs under its common Seal the signature clause should tally with their sealing clause in the Articles of Associations.

Witnesses

THE COMMON SEAL OF
Was hereunto affixed pursuant to the resolutions passed
By its Board of Directors at the meeting held on

.....
.....

..... The Contractor is signing by the hand of power of attorney whether a company or individual.

In the presence of

(1)
.....

.....

(2)
.....

.....

Directors who have signed these presents in taken thereof in the

presence of
(1)
.....
(2)
.....

The Contractor is signing by the hand of power of attorney whether a company or individual.

SIGNED AND DELIVERED BY the Contractor by the hand Of Shri
and duly constituted attorney.

FORM OF BANKERS' CERTIFICATE FROM A SCHEDULED BANK

1. Composition of the firm (whether Partnership/ Private Limited/ Proprietorship/ Public Limited.)
2. Name of the Proprietor/ Partners/ Directors of the firm.
3. Turnover of the firm for the last 3 years (year wise).
4. Credit facility/ Overdraft facility enjoyed by the firm.
5. Dealings
6. The period from which the firm has been banking with your bank.
7. Any other remarks.

You may also kindly forward your opinion whether the above firm is considered financially sound to be entrusted with the contract for works estimated to cost Rs.- _____ Lakhs.

(Signature) For the Bank

Note:

1. **Bankers' certificates should be on letter head of the Bank, sealed in cover addressed to enlistment authority.**
2. **In case of partnership firm, certificate to include names of all partners as recorded with the Bank.**

Details of Service Set up at the place of work

S. No.	Details of service Centre	
1	Address of Service Centre	
2	Contact numbers	
3	Staff strength	
4	Whether spares parts of the UPS system have been stocked	

Signature of the contractor

Schedule of Technical Deviations if any

We confirm that all technical terms and conditions and specifications of the Bank except for deviations listed below are acceptable to us.

Sr. No.	Section No.	Clause No.	Deviation proposed

Seal of companySignature

Name

Designation

Date

Details of Bankers

The details of our bankers in the following format are uploaded.

Sr. No.	Name of Bank	Branch and its complete address	Name of the contact person	Telephone and FAX number

Seal of companySignature

Name

Designation

Date

**FORMAT FOR POWER OF ATTORNEY FOR SIGNING OF
Application/Proposal**

(On Non-Judicial Stamp Paper of appropriate value)

Know all men by these presents,
We.....(Name of the Bidder and
address of their registered office) do hereby constitute, appoint and authorise Mr. /
Ms.

..... (Name and
residential address of Power of Attorney holder) who is presently employed with us
and holding the position of
..... as our attorney, to
do in our name and on our behalf, all such acts, deeds and things necessary in
connection with or incidental to our tender for **Design, Supply, Installation, Testing
and Commissioning of 2X20 KVA Uninterrupted Power Supply System in N+1
Parallel Redundant Mode at Reserve Bank Of India, Dehradun** including signing
and submission of all documents and providing information / responses to Estate
Department RBI Dehradun representing us in all matters before RBI Dehradun, and
generally dealing with RBI Dehradun in all matters in connection with our proposal for
the said Project.

We hereby agree to ratify all acts, deeds and things lawfully done by our said
attorney

Pursuant to this Power of Attorney and that all acts, deeds and things done by our
aforesaid attorney shall and shall always be deemed to have been done by us.

Note

Power of Attorney should be properly stamped and notarized
Power of Attorney furnished shall be irrevocable.

Signature/(s) of the Bidder

Name/(s)

Stamp/Seal of the Bidder

(NB): This guarantee will require stamp duty as applicable in the state, where it is
executed and shall be signed by the official whose signature and authority shall be
verified).

RESERVE BANK OF INDIA
Estate Department, Dehradun

PART-II

Tender for Design, Supply, Installation, Testing and Commissioning of 2X20 KVA Uninterrupted Power Supply System of Bank's Office Building at Reserve Bank of India, Dehradun 248001

Name of Tenderer _____

Address _____

Due Date of Submission: January 22, 2021 at 1300 hours

Reserve Bank of India

Tender for Design, Supply, Installation, Testing and Commissioning of 2X20 KVA Uninterrupted Power Supply System in N+1 Parallel Redundant Mode at Reserve Bank of India, Main office Building Dehradun 248001

Part II – Schedule of Quantities

Sr. No.	Description	Qty.	Rate (INR)	Unit	Amount (INR)
1.	<p>Supply, installation, testing and commissioning of 2 Nos. True On line UPS, each of 20 KVA capacity connected in (N+1) parallel redundant mode with capability to connect more UPS units of same capacity in parallel including circuit breakers, Common Paralleling bus bar panel, isolation transformers, inter-connecting cables, Copper earth conductors etc.as per detailed specifications.</p> <p>The rate shall also include for packing and forwarding charges, all taxes GST and duties as applicable and insurance charges for Contractor All Risk Policy including fire for supply, transit, storage, erection testing and commissioning etc., Workmen compensation policy and third-Party Liability policy as per terms and conditions and valid till virtual completion.</p> <p>The rate shall include for supply of software including loading in the PC to be provided by the Bank and showing the performance.</p>	1 set.		each	
2.	<p>Supply, installation, testing and commissioning of each battery bank for 30 Minutes backup for 20 KVA load (on each bank) at 0.9 Power factor as specified including battery circuit breaker, battery Rack, interconnecting cables from battery to battery and from UPS to Battery Bank and all other materials as required and initial charging (including packing and forwarding charges, all taxes GST and duties as applicable and insurance charges for Contractor All Risk Policy including fire for supply, transit, storage, erection testing and commissioning etc., Workmen compensation policy and third Party Liability policy as per terms and conditions and valid till virtual completion.)</p>	2 sets.		each	
	<p>Total Cost of UPS System including Batteries etc. (1+2) Capital Cost (A)</p>				

	Total Net cost of the system (A(1+2) - B)				
4	<p>Annual Comprehensive maintenance service charges (payable on half yearly basis on rendering satisfactory service) All-inclusive comprehensive annual maintenance service contract charges for the UPS system as in item No. 1 and 2 above (excluding replacement cost of batteries after warranty period) as per terms and conditions. The rate shall also include for all taxes and duties etc. as applicable valid for 1 year after one year of defect Liability Period. (i)Routine Inspection charges (ii) Charges per visit for breakdown call (iii) Comprehensive maintenance service including spares (iv) The rate shall also include for all taxes GST and duties etc. as applicable. for the UPS system as in item No. 1 (excluding replacement cost of batteries after warranty period) as per terms and conditions.</p> <p>On third year AMC amount will be renewed under of commercial condition of Part I of the tender. (B)</p>	1 set		per year	
5	<p>Net Owning Cost of System</p> <p>(Capital Cost (A) + AMC Charges (B) x MF (5.6321)</p>				

Evaluation of tenders:

Tenders will be evaluated on the basis of Net Owning Cost of the System comprising of the Capital Cost of the system (A) and taking into account the effect of rates quoted for comprehensive Annual Maintenance service contract charges (AMC) (B) for a period of 7 years after the expiry of one-year defect liability period.

NPV Factor will be calculated assuming 5% increase in contract amount every year after first year of AMC, half yearly payment and a discount rate of 8%.

Net Owning Cost of System = Capital Cost (A) + AMC Charges (B) x MF

(MF is the NPV factor for 8 years (1yr warranty+7 year AMC) = 5.6321)

Tender will be evaluated as per clause No. 16 mentioned in commercial condition of in Part I of tender

Signature of the contractor _____

Name of the firm _____

Seal of the firm _____